Panasonic®

Operating Instructions
High Definition
Custom Home Theater Plasma Display

Model No.   **TH-50VX100E**
TH-65VX100E

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

The illustration shown is an image.

Please read these instructions before operating your set and retain them for future reference.

English

TQBC2382-1

Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new Plasma Display.
To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.
Retain your purchase receipt also, and note down the model number and serial number of your set in the space provided on the rear cover of these instructions.
Visit our Panasonic Web Site   http://panasonic.net

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Note:
Do not allow a still picture to be displayed for an extended period, as this can cause a permanent image retention to remain on the Plasma Display.
Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode.

Important Safety Notice

WARNING
1) To prevent damage which may result in fire or shock hazard, do not expose this appliance to dripping or splashing.
   Do not place containers with water (flower vase, cups, cosmetics, etc.) above the set. (including on shelves above, etc.)
   No naked flame sources, such as lighted candles, should be placed on / above the set.
2) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
3) Do not remove the earthing pin on the power plug. This apparatus is equipped with a three pin earthing-type power plug. This plug will only fit an earthing-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.
   Do not defeat the purpose of the earthing plug.
4) To prevent electric shock, ensure the earthing pin on the AC cord power plug is securely connected.

CAUTION
This appliance is intended for use in environments which are relatively free of electromagnetic fields.
Using this appliance near sources of strong electromagnetic fields or where electrical noise may overlap with the input signals could cause the picture and sound to wobble or cause interference such as noise to appear.
To avoid the possibility of harm to this appliance, keep it away from sources of strong electromagnetic fields.

IMPORTANT: THE MOULDED PLUG

FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This display is supplied with a moulded three pin mains plug for your safety and convenience. A 10 amp fuse is fitted in this plug. Shall the fuse need to be replaced, please ensure that the replacement fuse has a rating of 10 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark ⬦ or the BSI mark ▽ on the body of the fuse.

If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic dealer.

Do not cut off the mains plug.
Do not use any other type of mains lead except the one supplied with this display.
The supplied mains lead and moulded plug are designed to be used with this display to avoid interference and for your safety.
If the socket outlet in your home is not suitable, get it changed by a qualified electrician.
If the plug or mains lead becomes damaged, purchase a replacement from an authorized dealer.

WARNING : — THIS DISPLAY MUST BE EARTHED.

How to replace the fuse. Open the fuse compartment with a screwdriver and replace the fuse.
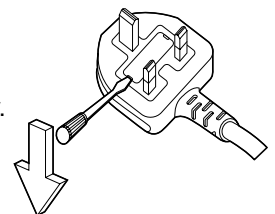
Safety Precautions

WARNING

■ Setup

<u>This Plasma Display is for use only with the following optional accessories.</u> **Use with any other type of optional accessories may cause instability which could result in the possibility of injury.**

(All of the following accessories are manufactured by Panasonic Corporation.)

- Pedestal ....TY-ST50VX100 (for TH-50VX100E),
  TY-ST65VX100 (for TH-65VX100E)
- Wall-hanging bracket (vertical).............................TY-WK42PV7 (for TH-50VX100E),
  TY-WK65PV7 (for TH-65VX100E)
- Wall-hanging bracket (angled) ....TY-WK42PR7 (for TH-50VX100E),
  TY-WK65PR8 (for TH-65VX100E)
- BNC Component Video Terminal Board TY-42TM6A
- RCA Component Video Terminal Board................TY-42TM6Z
- HD-SDI Terminal Board TY-FB9HD
- HD-SDI Terminal Board with audio TY-FB10HD
- Dual Link HD-SDI Terminal Board TY-FB11DHD
- Dual HDMI Terminal Board TY-FB10HMD
- Ir Through Terminal Board TY-FB9RT
- DVI-D Terminal Board TY-FB11DD

Always be sure to ask a qualified technician to carry out set-up.

Small parts can present choking hazard if accidentally swallowed. Keep small parts away from young children. Discard unneeded small parts and other objects, including packaging materials and plastic bags/sheets to prevent them from being played with by young children, creating the potential risk of suffocation.

Do not place the Plasma Display on sloped or unstable surfaces.
- The Plasma Display may fall off or tip over.

Do not place any objects on top of the Plasma Display.
- If water is spills onto the Plasma Display or foreign objects get inside it, a short-circuit may occur which could result in fire or electric shock. If any foreign objects get inside the Plasma Display, please consult your local Panasonic dealer.

Transport only in upright position!
- Transporting the unit with its display panel facing upright or downward may cause damage to the internal circuitry.

Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths and curtains.

For sufficient ventilation;
If using the pedestal (optional accessory), leave a space of 10 cm or more at the top, left and right, and 7 cm or more at the rear, and also keep the space between the bottom of the display and the floor surface.
If using some other setting-up method, follow the manual of it. (If there is no specific indication of installation dimension in the installation manual, leave a space of 10 cm or more at the top, bottom, left and right, and 7 cm or more at the rear.)

■ When using the Plasma Display

The Plasma Display is designed to operate on 220 - 240 V AC, 50/60 Hz.

Do not cover the ventilation holes.
• Doing so may cause the Plasma Display to overheat, which can cause fire or damage to the Plasma Display.

Do not stick any foreign objects into the Plasma Display.
• Do not insert any metal or flammable objects into the ventilations holes or drop them onto the Plasma Display, as doing so can cause fire or electric shock.

Do not remove the cover or modify it in any way.
• High voltages which can cause severe electric shocks are present inside the Plasma Display. For any inspection, adjustment and repair work, please contact your local Panasonic dealer.

Ensure that the mains plug is easily accessible.

An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.

Do not use any power supply cord other than that provided with this unit.
• Doing so may cause fire or electric shocks.

Securely insert the power supply plug as far as it will go.
• If the plug is not fully inserted, heat may be generated which could cause fire. If the plug is damaged or the wall socket is loose, they shall not be used.

Do not handle the power supply plug with wet hands.
• Doing so may cause electric shocks.

Do not do anything that may damage the power cable. When disconnecting the power cable, pull on the plug body, not the cable.
• Do not damage the cable, make any modifications to it, place heavy objects on top of it, heat it, place it near any hot objects, twist it, bend it excessively or pull it. To do so may cause fire and electric shock. If the power cable is damaged, have it repaired at your local Panasonic dealer.

If the Plasma Display is not going to be used for any prolonged length of time, unplug the power supply plug from the wall outlet.

■ If problems occur during use

If a problem occurs (such as no picture or no sound), or if smoke or an abnormal odour starts to come out from the Plasma Display, immediately unplug the power supply plug from the wall outlet.
• If you continue to use the Plasma Display in this condition, fire or electric shock could result. After checking that the smoke has stopped, contact your local Panasonic dealer so that the necessary repairs can be made. Repairing the Plasma Display yourself is extremely dangerous, and shall never be done.

If water or foreign objects get inside the Plasma Display, if the Plasma Display is dropped, or if the cabinet becomes damages, disconnect the power supply plug immediately.
• A short circuit may occur, which could cause fire. Contact your local Panasonic dealer for any repairs that need to be made.

Safety Precautions

⚠ CAUTION

■ When using the Plasma Display

Do not bring your hands, face or objects close to the ventilation holes of the Plasma Display.
• Heated air comes out from the ventilation holes at the top of Plasma Display will be hot. Do not bring your hands or face, or objects which cannot withstand heat, close to this port, otherwise burns or deformation could result.

Be sure to disconnect all cables before moving the Plasma Display.
• If the Plasma Display is moved while some of the cables are still connected, the cables may become damaged, and fire or electric shock could result.

Disconnect the power supply plug from the wall socket as a safety precaution before carrying out any cleaning.
• Electric shocks can result if this is not done.

Clean the power cable regularly to prevent it becoming dusty.
• If dust built up on the power cord plug, the resultant humidity can damage the insulation, which could result in fire. Pull the power cord plug out from the wall outlet and wipe the mains lead with a dry cloth.

Do not burn or breakup batteries.
• Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

This Plasma Display radiates infrared rays, therefore it may affect other infrared communication equipment. Install your infrared sensor in a place away from direct or reflected light from your Plasma Display.

Cleaning and maintenance

The front of the display panel has been specially treated. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth.
• If the surface is particularly dirty, wipe with a soft, lint-free cloth which has been soaked in pure water or water in which neutral detergent has been diluted 100 times, and then wipe it evenly with a dry cloth of the same type until the surface is dry.
• Do not scratch or hit the surface of the panel with fingernails or other hard objects, otherwise the surface may become damaged. Furthermore, avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the surface may be adversely affected.

If the cabinet becomes dirty, wipe it with a soft, dry cloth.
• If the cabinet is particularly dirty, soak the cloth in water to which a small amount of neutral detergent has been added and then wring the cloth dry. Use this cloth to wipe the cabinet, and then wipe it dry with a dry cloth.
• Do not allow any detergent to come into direct contact with the surface of the Plasma Display. If water droplets get inside the unit, operating problems may result.
• Avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the cabinet surface may be adversely affected or the coating may peel off. Furthermore, do not leave it for long periods in contact with articles made from rubber or PVC.
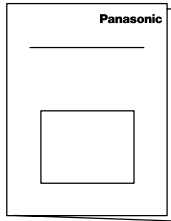
Accessories

Accessories Supply

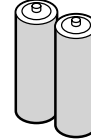### Check that you have the accessories and items shown ☑
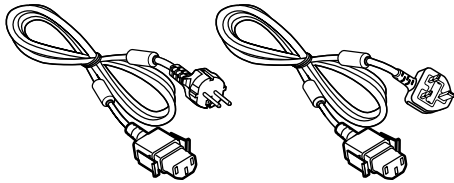
☐ Operating Instruction book

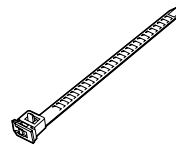☐ Remote Control Transmitter N2QAYB000323

☐ Batteries for the Remote Control Transmitter (2 × R6 (UM3) Size)
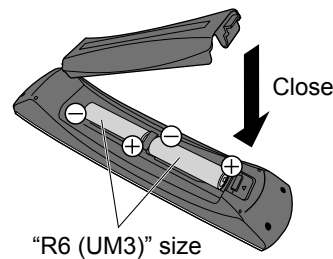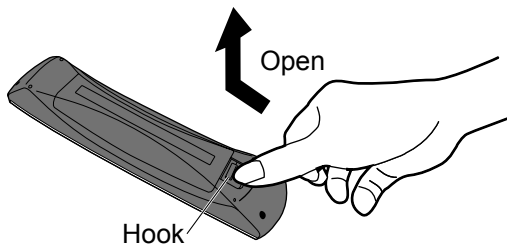
☐ Power supply cord

☐ Fixing band × 1

Remote Control Batteries

Requires two R6 batteries.

1. Pull and hold the hook, then open the battery cover.

2. Insert batteries - note correct polarity (+ and -).

Open

Hook

Close

"R6 (UM3)" size

Helpful Hint:
For frequent remote control users, replace old batteries with Alkaline batteries for longer life.

⚠ Precaution on battery use

Incorrect installation can cause battery leakage and corrosion that will damage the remote control transmitter.
Disposal of batteries should be in an environment-friendly manner.

Observe the following precaution:

1. Batteries shall always be replaced as a pair. Always use new batteries when replacing the old set.
2. Do not combine a used battery with a new one.
3. Do not mix battery types (example: "Zinc Carbon" with "Alkaline").
4. Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
5. Battery replacement is necessary when remote control acts sporadically or stops operating the Plasma Display set.
6. Do not burn or breakup batteries.
   Batteries must not be exposed to excessive heat such as sunshine, fire or the like.
7. Make a note of the remote control codes before changing batteries in case the codes are reset. (see page 43)

Connections

When connecting the speakers, be sure to use only the optional accessory speakers.
Refer to the speaker's Installation Manual for details on speaker installation.

Speaker terminal (L)

Speaker terminal (R)

AC cord connection (see page 12)
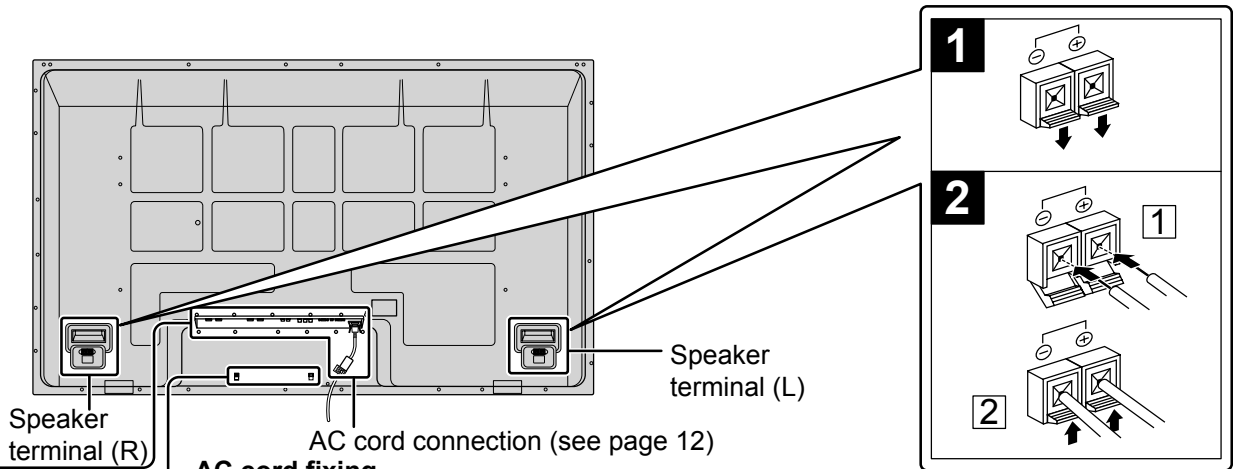
– AC cord fixing
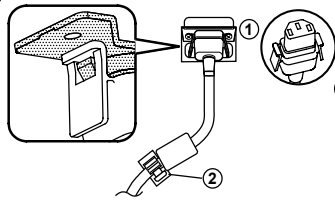
Note:
Make sure that the AC cord is locked on both the left and right sides.

① **Plug the AC cord into the display unit.**
Plug the AC cord until it clicks.
② **Fix the AC cord with the clamper which is attached to the unit.**

Close
Push until the hook clicks.

Open
2. Pull off.
1. Keep the knob pressed.

Unplug the AC cord
Unplug the AC cord pressing the two knobs.

Note:
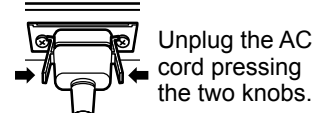When disconnecting the AC cord, be absolutely sure to disconnect the AC cord plug at the socket outlet first.

– Cable fixing band
Secure any excess cables with band as required.
Note:
One fixing band is supplied with this unit. In case of securing cables at two positions, please purchase it separately.

Pass the attached cable fixing band through the clip as shown in the figure. **1**	To secure cables connected to Terminals, wrap the cable fixing band around them then pass the pointed end through the locking block, as shown in the figure. **While ensuring there is sufficient slack in cables to minimize stress (especially in the power cord), firmly bind all cables with the supplied fixing band.** To tighten: Pull To loosen: Push the catch — Pull **2**
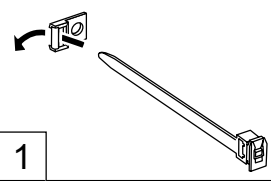
A — B HDMI AV IN
SLOT1

A — B HDMI AV IN
SLOT2

R — AUDIO — L Pв/Cв/R Pв/Cв/B Y/G
COMPONENT/RGB IN
SLOT3

PC IN
AUDIO

SERIAL
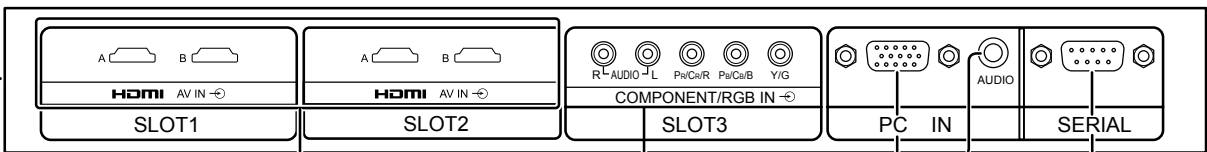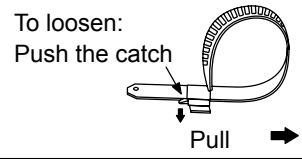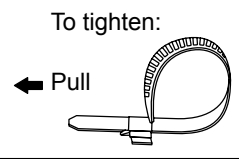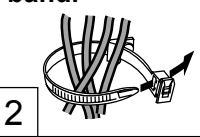
Dual HDMI Terminals (equivalent of Dual HDMI Terminal Board (TY-FB10HMD)) (see page 11)

COMPONENT/RGB IN and Audio IN Terminals (equivalent of RCA Component Video Terminal Board (TY-42TM6Z)) (see page 11)

From EXTERNAL monitor terminal on Computer (see page 9)

From SERIAL Terminal on Computer (see page 10)

Note: At factory shipment, Terminal boards are installed in SLOT 1, SLOT 2 and SLOT 3.

PC Input Terminals connection

COMPUTER

(Female)

AUDIO

PC IN

Conversion adapter
(if necessary)

RGB
PC cable

Mini D-sub 15p

(Male)

Audio

Stereo plug

Connect a cable which matches
the audio output terminal on the computer.

Notes:
- Due to space limitations, occasionally you may have trouble connecting Mini D-sub 15P cable with ferrite core to PC input Terminal.
- With regard to the typical PC input signals that are described in the applicable input signals list (see page 49), adjustment values such as for the standard picture positions and sizes have already been stored in this unit. You can add up to eight PC input signal types that are not included in the list.
- Computer signals which can be input are those with a horizontal scanning frequency of 15 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
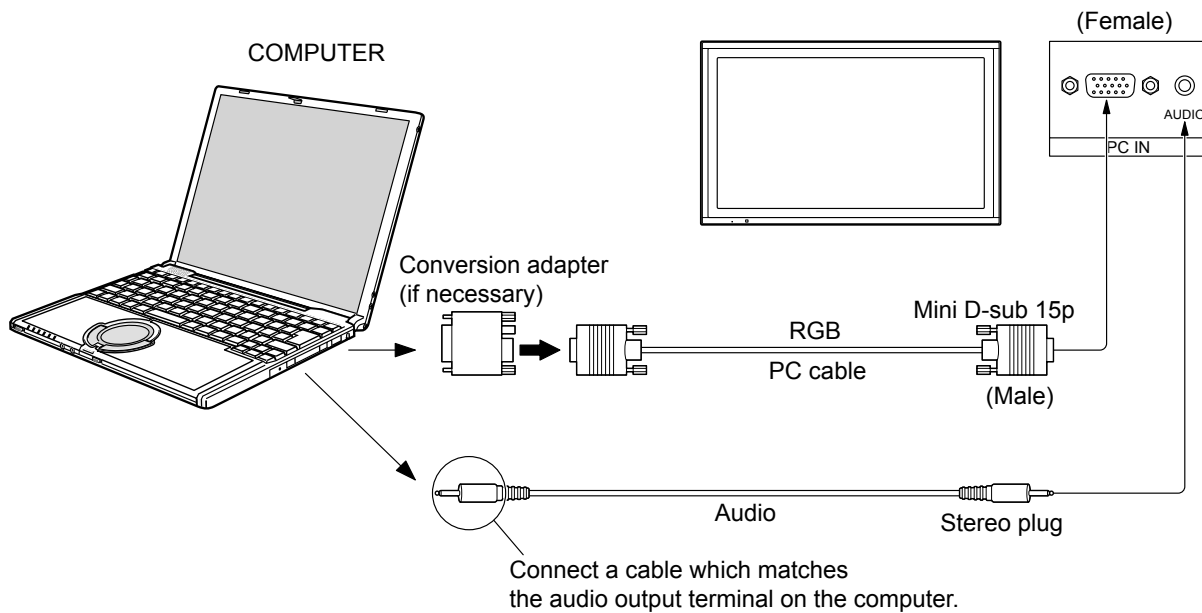- The display resolution is a maximum of 1,440 × 1,080 dots when the aspect mode is set to "4:3", and 1,920 × 1,080 dots when the aspect mode is set to "16:9". If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity.
- The PC input terminals are DDC2B-compatible. If the computer being connected is not DDC2B-compatible, you will need to make setting changes to the computer at the time of connection.
- Some PC models cannot be connected to the set.
- There is no need to use an adapter for computers with DOS/V compatible Mini D-sub 15P terminal.
- The computer shown in the illustration is for example purposes only.
- Additional equipment and cables shown are not supplied with this set.
- Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.
- Component Input is possible with the pin 1, 2, 3 of the Mini D-sub 15P Connector.
- To use sync input VBS signals, use the connector which incorporates a 75-ohm termination resistance and which is available on the market, for the connection of the HD connector where the VBS signals are to be input.
- Change the "Component/RGB-in select" setting in the "Setup" menu to "Component" (when Component signal connection) or "RGB" (when RGB signal connection). (see page 38)

Signal Names for Mini D-sub 15P Connector
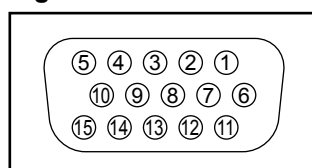
Pin Layout for PC Input Terminal

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R (P_R/C_R)	⑥	GND (Ground)	⑪	NC (not connected)
②	G (Y)	⑦	GND (Ground)	⑫	SDA
③	B (P_B/C_B)	⑧	GND (Ground)	⑬	HD/SYNC
④	NC (not connected)	⑨	+5 V DC	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	SCL

SERIAL Terminals connection

The SERIAL terminal is used when the Plasma Display is controlled by a computer.

Pin layout for SERIAL Terminal
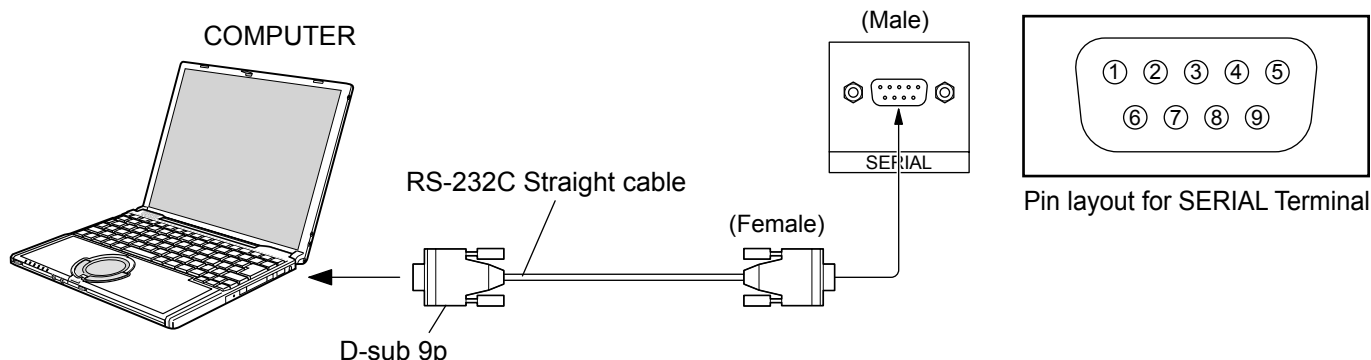
Notes:
• Use the RS-232C straight cable to connect the computer to the Plasma Display.
• The computer shown is for example purposes only.
• Additional equipment and cables shown are not supplied with this set.

The SERIAL terminal conforms to the RS-232C interface specification, so that the Plasma Display can be controlled by a computer which is connected to this terminal.
The computer will require software which allows the sending and receiving of control data which satisfies the conditions given below. Use a computer application such as programming language software. Refer to the documentation for the computer application for details.

Communication parameters

Signal level	RS-232C compliant
Synchronization method	Asynchronous
Baud rate	9600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
Flow control	-

Basic format for control data
The transmission of control data from the computer starts with a STX signal, followed by the command, the parameters, and lastly an ETX signal in that order. If there are no parameters, then the parameter signal does not need to be sent.
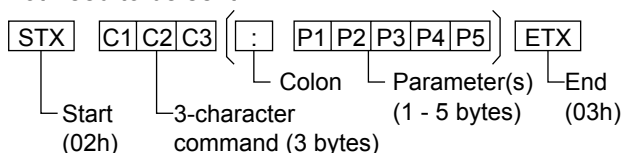
Notes:
• If multiple commands are transmitted, be sure to wait for the response for the first command to come from this unit before sending the next command.
• If an incorrect command is sent by mistake, this unit will send an "ER401" command back to the computer.
• SL1A, SL1B, SL2A and SL2B of Command IMS are available only when a dual input terminal board is attached.

Signal names for D-sub 9P connector

Pin No.	Details
②	R X D
③	T X D
⑤	GND
④ • ⑥	Non use
⑦ ⑧	(Shorted in this set)
① • ⑨	NC

These signal names are those of computer specifications.

Command

| Command	Parameter	Control details
PON	None	Power ON
POF	None	Power OFF
AVL	**	Volume 00 - 63
IMS	None	Input select (toggle)
	SL1	Slot1 input
	SL2	Slot2 input
	SL3	Slot3 input
	PC1	PC input
	SL1A	Slot1 input (INPUT1A)
	SL1B	Slot1 input (INPUT1B)
	SL2A	Slot2 input (INPUT2A)
	SL2B	Slot2 input (INPUT2B)
DAM	None	Screen mode select (toggle)
	ZOOM	Zoom1
	FULL	16:9
	JUST	Just
	NORM	4:3
	ZOM2	Zoom2
	ZOM3	Zoom3
	SJST	Just
	SNOM	4:3
	SFUL	4:3 Full
	14:9	14:9

With the power off, this display responds to PON command only.

HDMI connection

This unit has terminal boards equivalent to Dual HDMI Terminal Board (TY-FB10HMD) and RCA Component Video Terminal Board (TY-42TM6Z) as standard equipment.

[Pin assignments and signal names]

Pin No.	Signal	Pin No.	Signal
①	T.M.D.S Data2+	⑪	T.M.D.S Clock Shield
②	T.M.D.S Data2 Shield	⑫	T.M.D.S Clock-
③	T.M.D.S Data2-	⑬	CEC
④	T.M.D.S Data1+	⑭	Reserved (N.C. on device)
⑤	T.M.D.S Data1 Shield		
⑥	T.M.D.S Data1-	⑮	SCL
⑦	T.M.D.S Data0+	⑯	SDA
⑧	T.M.D.S Data0 Shield	⑰	DDC/CEC Ground
⑨	T.M.D.S Data0-	⑱	+5V Power
⑩	T.M.D.S Clock+	⑲	Hot Plug Detect

HDMI cables

HDMI cables
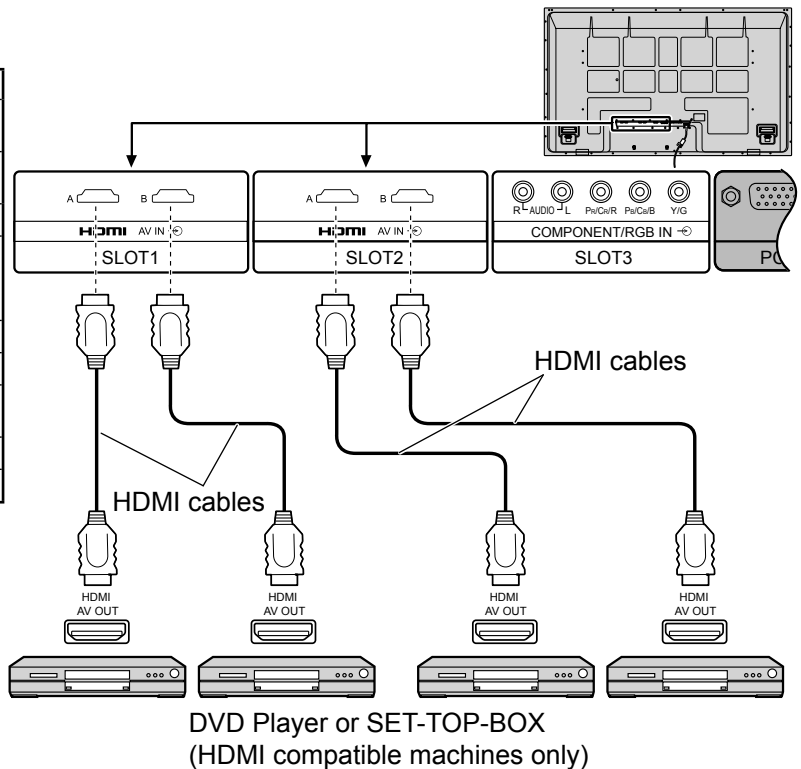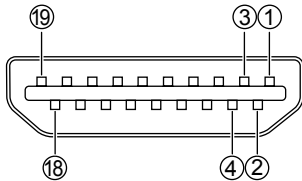
HDMI cables

Note:
Additional equipment and HDMI cables shown are not supplied with this set.

DVD Player or SET-TOP-BOX
(HDMI compatible machines only)

COMPONENT / RGB connection

COMPONENT VIDEO OUT

Example of input signal source

DVD

Digital TV-SET-TOP-BOX (DTV-STB)

P_R

P_B

Y, P_B, P_R, OUT

Y

L

AUDIO OUT

R

COMPONENT/RGB IN

SLOT3

Computer   RGB Camcorder

or
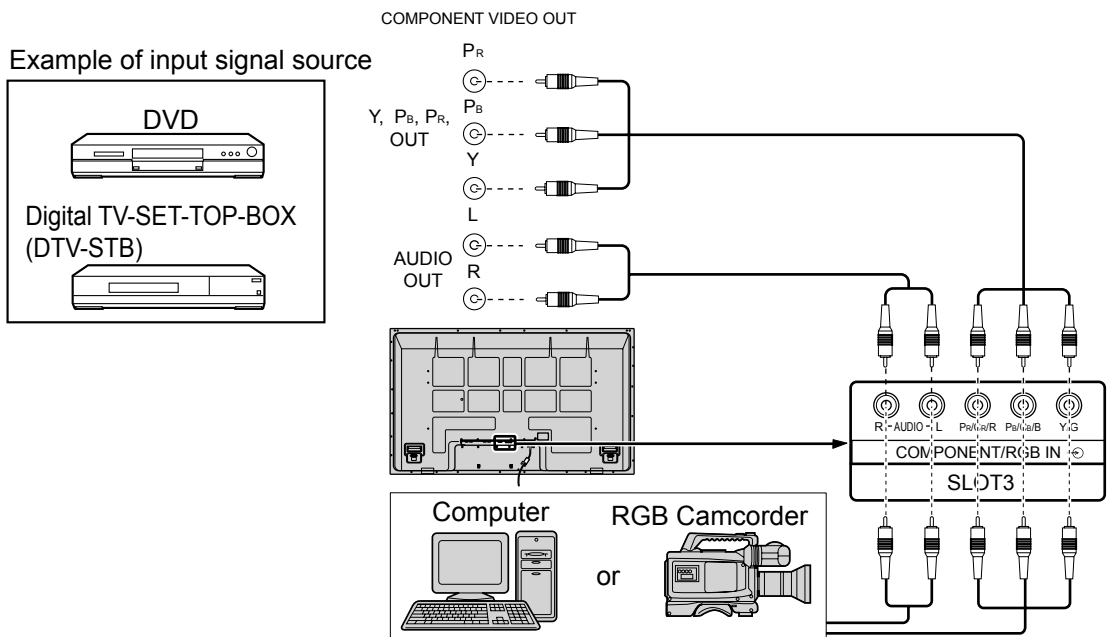
Notes:
• Change the "Component/RGB-in select" setting in the "Setup" menu to "Component" (when Component signal connection) or "RGB" (when RGB signal connection). (see page 38)
• Additional equipment, cables and adapter plugs shown are not supplied with this set.
• Sync on G signal is needed. (see page 40)

Power On / Off

Connecting the AC cord plug to the Plasma Display.

Fix the AC cord plug securely to the Plasma Display with the clamper. (see page 8)

Connecting the plug to the Wall Outlet.

Notes:
• Main plug types vary between countries. The power plug shown at right may, therefore, not be the type fitted to your set.
• When disconnecting the AC cord, be absolutely sure to disconnect the AC cord plug at the socket outlet first.
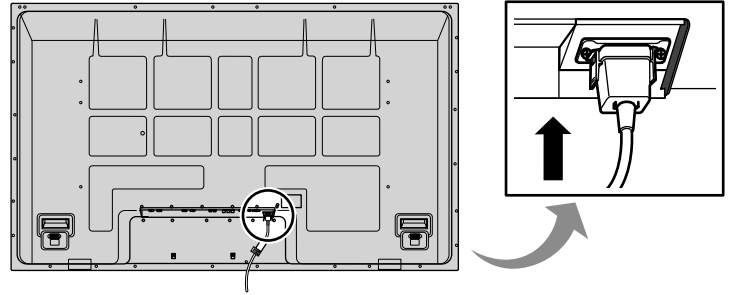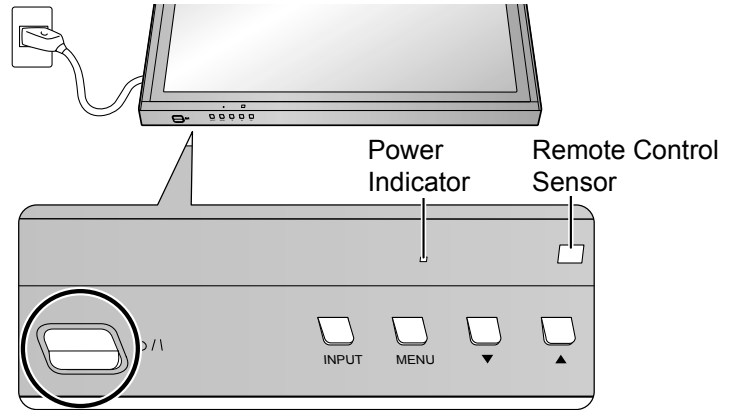
Press the Power switch on the Plasma Display to turn the set on: Power-On.

Power Indicator: Green

Power Indicator

Remote Control Sensor

INPUT   MENU   ▼   ▲

When first switching on the unit

Following screen will be displayed when the unit is turned on for the first time.
Select the language with the remote control.
Unit buttons are invalid.

① Select the language.

② Set.

OSD Language

English (UK)
Deutsch
Français
Italiano
Español
ENGLISH (US)
日本語
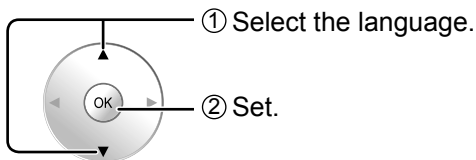
From the second time on, the below screen is displayed for a while (setting condition is an example).

PC
16:9
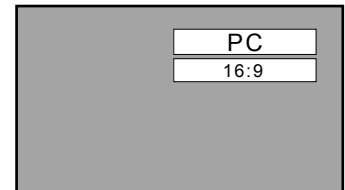
Notes:
• Once the language is set, the screen won't be displayed when switching on the unit next time.
• From the second time on, language selection can be done from the Setup menu. (see page 13)
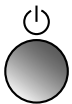
Press the ⏻ button on the remote control to turn the Plasma Display off.

Power Indicator: Red (standby)

Press the ⏻ button on the remote control to turn the Plasma Display on.

Power Indicator: Green

Turn the power to the Plasma Display off by pressing the ⏻/l switch on the unit, when the Plasma Display is on or in standby mode.

Note:
During operation of the power management function, the power indicator turns orange in the power off state.

Initial selections

Selecting the input signal

Select the input signals to be connected by installing the optional Terminal Boards.

∧ INPUT ∨   Press to select the input signal to be played back from the equipment which has been connected to the Plasma Display.
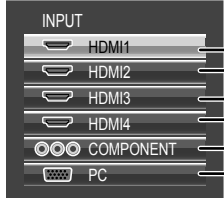
INPUT
- HDMI1 — HDMI signal terminal in SLOT1
- HDMI2
- HDMI3 — HDMI signal terminal in SLOT2
- HDMI4
- COMPONENT — COMPONENT or RGB signal terminal in SLOT3
- PC — PC signal terminal in PC IN

Using dedicated buttons for input selection

HDMI
1 2 3 4 — Press to select HDMI signal terminals 1–4 in SLOT 1 and 2.

COMPO. — Press to select component or RGB signal terminal in SLOT 3.

PC — Press to select PC signal terminal in PC IN.
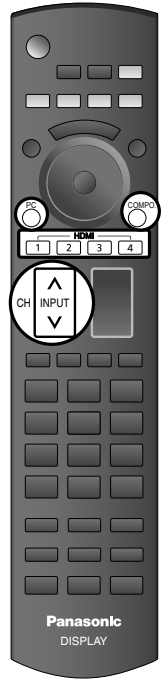
Notes:
- Selecting is also possible by pressing the INPUT button on the unit.
- Input terminal will not be selected if the terminal board is not installed into the SLOT.
- Select to match the signals from the source connected to the component/RGB input terminals. (see page 38)
- Image retention (image lag) may occur on the plasma display panel when a still picture is kept on the panel for an extended period. The function that darkens the screen slightly is activated to prevent image retention (see page 45), but this function is not the perfect solution to image retention.
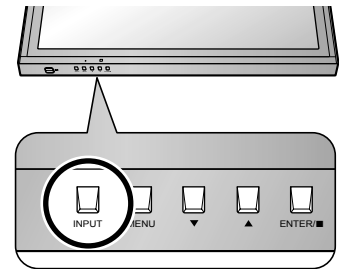
Selecting the On-Screen Menu Language

MENU — Press to display the menu screen.
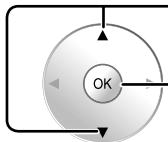
Press to select "Setup".

OK — Press to display the Setup menu.
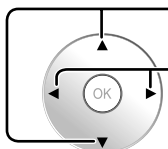
Press to select OSD Language.
Press to select your preferred language.

■ Selectable languages
English(UK)
Deutsch
Français
Italiano
Español
ENGLISH(US)
日本語 (Japanese)

Setup menu

| Picture |
| Setup |
| Pos. /Size |
| Sound |

Setup menu

Signal	
Screensaver	
Component/RGB-in select	RGB
External scaler mode	Off
OSD position	Upper left
OSD Language	◄ English (UK) ►
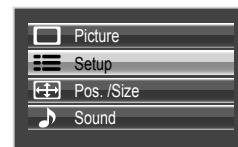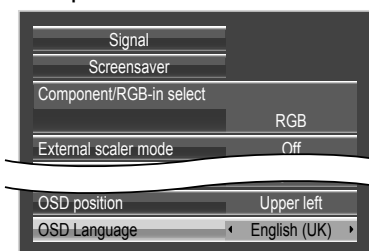
Basic Controls

Main Unit

**INPUT button
(INPUT1, INPUT2,
INPUT3 and PC
selection)**
(see page 13)

When the menu screen is displayed:
" ▲ ": press to move the cursor up
" ▼ ": press to move the cursor
down (see page 18)

**Remote control
sensor**

**Enter / Aspect
button**
(see page 17, 18)

INPUT   MENU   ▼   ▲   ENTER/■

ᵕ/।

Main Power On / Off Switch

Power Indicator
The Power Indicator will light.
• Power-OFF...... Indicator not illuminated (The
unit will still consume some
power as long as the power
cord is still inserted into the
wall outlet.)
• Standby .... Red
• Power-ON .... Green
• DPMS.............. Orange (With PC input signal
and during operation of PC's
screensaver.)

MENU Screen ON / OFF
Each time the MENU button is pressed, the menu
screen will switch. (see page 18)

14

Remote Control Transmitter

POS. /SIZE button
(see page 30)

Standby (ON / OFF) button
The Plasma Display must first be plugged into the wall outlet and turned on at the power switch (see page 12). Press this button to turn the Plasma Display On, from Standby mode. Press it again to turn the Plasma Display Off to Standby mode.

FUNCTION button
(see page 16)

OK button
Press to make selections.

POSITION buttons

PC button
Press to select PC input. (see page 13)

DIRECT INPUT buttons
Press the each button to select the INPUT mode. (see page 13) This button is used to switch directly to INPUT mode.

INPUT button
(see page 13)

VIDEO MENU button
Press to select Picture Mode. (see page 20)

→ Normal ⟷ Dynamic ←
→ Monitor ⟷ Cinema ←
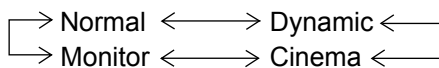
EXT.SCALER button
(see page 16)

ASPECT button
Press to adjust the aspect. (see page 17)

Numeric buttons
(see page 26)

MEM. LOAD button
(see page 26)

External equipment operations
(see page 42)

PICTURE button
(see page 20)

LIGHT button
Lights the INPUT and VIDEO MENU buttons for 5 seconds. Makes the selected remote control mode key (DISPLAY, VCR, DBS/CBL or DVD) flash three times. Press again to turn off the INPUT and VIDEO MENU button lights.

Equipment (Remote control mode) selection buttons (see page 42, 43)

MENU button
Displays menu screen. (see page 18)

RETURN button (see page 18)
Press the RETURN button to return to previous menu screen.

COMPO. button
Press to select COMPONENT or RGB input. (see page 13)

OFF TIMER button
The Plasma Display can be preset to switch to stand-by after a fixed period. The setting changes to 30 minutes, 60 minutes, 90 minutes and 0 minutes (off timer cancelled) each time the button is pressed.

$$\rightarrow \boxdot 30 \rightarrow \boxdot 60 \rightarrow \boxdot 90$$
$$\boxdot 0 \longleftarrow$$
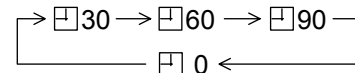
When three minutes remain, "Off timer 3" will flash.
The off timer is cancelled if a power interruption occurs.

RECALL button
Press to display the current system status.
① Input label
② Aspect mode (see page 17)
③ Off timer
   The off timer indicator is displayed only when the off timer has been set.

PC	─①
4:3	─②
Off timer 90	─③
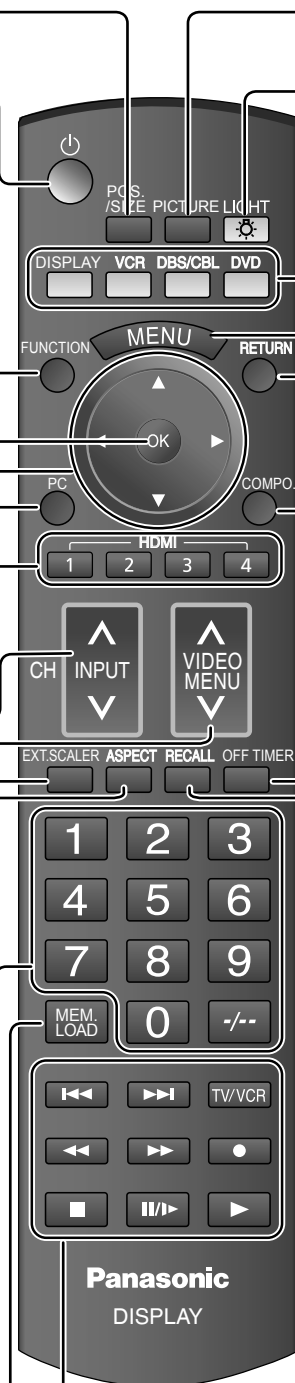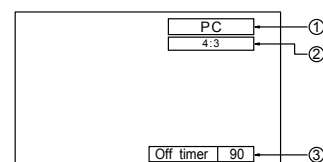
Scrolling bar and Test patterns functions

Pressing ^{FUNCTION} ⬤ activates one of the following two functions. The function button setting can be configured by accessing "Function button assign" in the Options menu. (see page 41)

Scrolling bar

FUNCTION

⬤ ——— Press

Scrolling bar
Scrolling bar
Yes   No

Press to select "Yes".

Press.

Activates the Scrolling bar only screensaver. After 15 minutes, the display enters standby mode.

Scrolling bar only

To exit this mode, press any button.

Test patterns

FUNCTION

⬤ ——— Press

Test patterns
Test patterns
Yes   No

Press to select "Yes".

Press.

Each time you press 🆗 a different test pattern is displayed (seven in all).

Colour Bars → Red → Green

Black ← 1% window ← Frame (2 lines × 2 dots) ← Blue
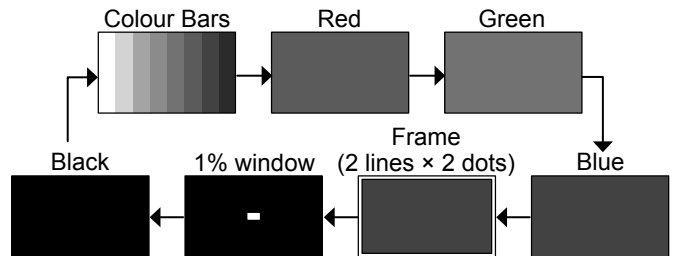
To exit this mode, press any button other than 🆗.

Note:
Auto power off is deactivated during Scrolling bar or Test patterns operation. (see page 36)

EXT. SCALER function

Each time you press ^{EXT.SCALER}▭, an external scaler is activated or deactivated.

External scaler mode   On
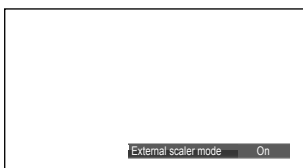
Off: Use the built-in scaler.
On: Use an external scaler.

The setting is valid with the following signals.
1125 (1080) / 24p•25p•30p•50p•60p
With input signals other than these, specifying "On" will display the following message.

Input signal must be 1125p(1080p)
External scaler mode   On
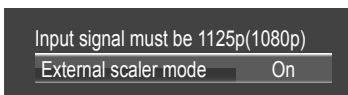
Note:
You can also turn the built-in scaler On and Off by accessing "External scaler mode" in the Setup menu. (see page 35)

16

ASPECT Controls

The Plasma Display will allow you to enjoy viewing the picture at its maximum size, including wide screen cinema format picture.

Note:
Be aware that if you put the display in a public place for commercial purposes or a public showing and then use the aspect mode select function to shrink or expand the picture, you may be violating the copyright under copyright law. It is prohibited to show or alter the copyrighted materials of other people for commercial purposes without the prior permission of the copyright holder.

ASPECT

Press repeatedly to move through the aspect options:
For details about the aspect mode, please see "List of Aspect Modes" (page 46).

[from the unit]

INPUT   MENU   ▼   ▲   ENTER/■

The aspect mode changes each time the ENTER button is pressed.

For PC signal input:

→ 4:3 → Zoom → 16:9 ┐

For SD signal input (525 (480) / 60i • 60p, 625 (575) / 50i • 50p):

→ 4:3 → Zoom1 → Zoom2 → Zoom3 → 16:9 → 14:9 → Just ┐

For HD signal input [1125 (1080) / 60i • 50i • 60p • 50p • 24p • 25p • 30p • 24sF, 1250 (1080) / 50i, 750 (720) / 60p • 50p]:

→ 4:3 → 4:3 Full → Zoom1 → Zoom2 ┐
┐ Just ← 14:9 ← 16:9 ← Zoom3 ←┘

Notes:
• The aspect mode is memorized separately for each input terminal.
• Do not allow the picture to be displayed in 4:3 mode for an extended period, as this can cause a permanent image retention to remain on the Plasma Display Panel.

All Aspect mode
Set "All Aspect" to "On" in Options menu to enable the extended aspect mode (page 41). When All Aspect mode, the aspect mode of pictures is switched as follows. For details about the aspect mode, please see "List of Aspect Modes" (page 46)

For PC signal input:

→ 4:3 → Zoom → 16:9 ┐

For SD signal input (525 (480) / 60i • 60p, 625 (575) / 50i • 50p):

→ 4:3 → Zoom1 → Zoom2 → Zoom3 → 16:9 → 14:9 → Just ┐

For HD signal input [1125 (1080) / 60i • 50i • 60p • 50p • 24p • 25p • 30p • 24sF, 1250 (1080) / 50i, 750 (720) / 60p • 50p]:

→ 4:3 Full → Zoom1 → Zoom2 → Zoom3 → 16:9 → 14:9 → Just1 → Just2 → 4:3 (1) → 4:3 (2) ┐

On-Screen Menu Displays

Various menus allow you to make settings for the picture, sound, and other functions so that you can enjoy watching Display best suited for you.
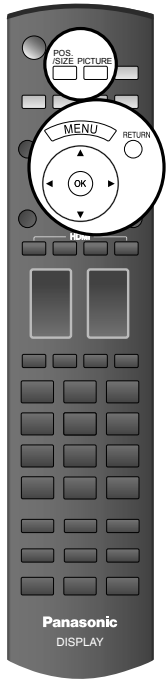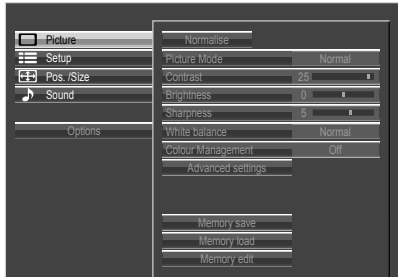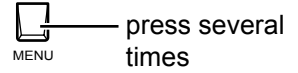
Remote Control　　　　**Unit**

1 **Display the menu screen.**

🖵 Picture	Normalise
☰ Setup	Picture Mode　　Normal
⊞ Pos. /Size	Contrast　　25
♪ Sound	Brightness　　0
	Sharpness　　5
Options	White balance　　Normal
	Colour Management　　Off
	Advanced settings
	Memory save
	Memory load
	Memory edit

MENU — press

MENU — press several times

Each time the MENU button is pressed, the menu screen will switch.

↓
Normal Viewing
↓
Picture
↓
Setup
↓
Pos. /Size
↓
Sound

2 **Select the menu.**

🖵 Picture
☰ Setup
⊞ Pos. /Size
♪ Sound
Options
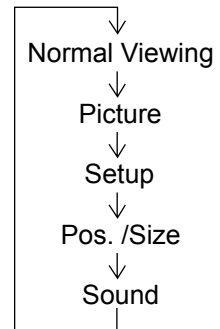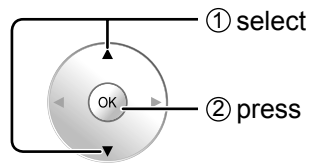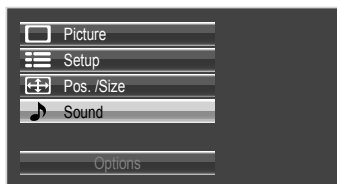
(Example: Sound menu)

① select

② press

Menus can also be accessed directly by pressing dedicated buttons, such as POS./SIZE and PICTURE.
(see page 20, 30)
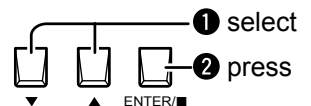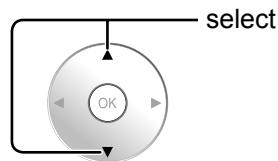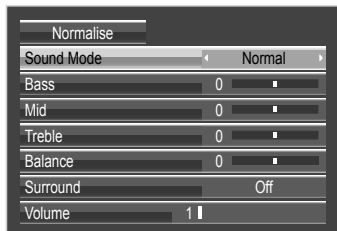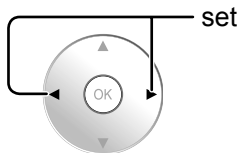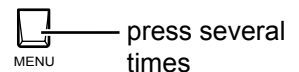
Press to return to the previous menu.

RETURN

3 **Select the item.**

Normalise	
Sound Mode	◄ Normal ►
Bass	0
Mid	0
Treble	0
Balance	0
Surround	Off
Volume	1

(Example: Sound menu)

select

❶ select
❷ press
▼　▲　ENTER/■

4 **Set.**

set

❶ set
❷ press
▼　▲　ENTER/■

5 **Exit the menu.**

MENU — press

MENU — press several times

Panasonic
DISPLAY

Overview

Note: Menu that cannot be adjusted is grayout. Adjustable menu changes depending on signal, input and menu setting.

Picture
Setup
Pos. /Size
Sound
Options

Normalise	
Picture Mode	Normal
Contrast	25
Brightness	0
Colour	6
Hue	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	
Memory save	
Memory load	
Memory edit	

see page 20-29

Advanced settings	
Normalise	
Black extension	0
Input level	0
Gamma	2.2
AGC	Off
W/B High R	0
W/B High G	0
W/B High B	0
W/B Low R	0
W/B Low G	0
W/B Low B	0
Cinema reality	Off
Studio Gain	Off
Noise reduction	Off

see page 22, 23

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off
Standby save	On
Power management	Off
Auto power off	Off
OSD design	Type1
OSD position	Upper left
OSD Language	English (UK)

see page 33-40

Signal	[Component]
XGA Mode	1024 ×768

see page 39, 40

Screensaver	
Start	
Function	Negative image
Side panel	High
Wobbling	Off
Peak limit	Off

see page 33, 34

Normalise	
Auto Setup	
H-Pos	0
H-Size	0
V-Pos	0
V-Size	0
Dot Clock	0
Clock Phase	-16
1:1 Pixel Mode	Off
Display size	Off

see page 30, 31

Normalise	
Sound Mode	Normal
Bass	0
Mid	0
Treble	0
Balance	0
Surround	Off
Volume	1

see page 32

SDI Sound Output	2/2
Left Channel	Channel 1
Right Channel	Channel 2
Sound Out	On
Level Meter	Off

see page 32

Onscreen display	On
All Aspect	Off
Studio mode	Off
Function button assign	Scrolling bar
Memory lock	

see page 41

Picture Adjustments

1   **Display the menu screen.**   MENU

2   **Select "Picture".**

▢	Picture
▤	Setup
⊞	Pos. /Size
♪	Sound

② OK
① select

During "RGB" and "PC" input signal.

Normalise	
Picture Mode	◄ Normal ►
Contrast	25
Brightness	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	

3   **Select the item and set.**

Normalise	
Picture Mode	◄ Normal ►
Contrast	25
Brightness	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	
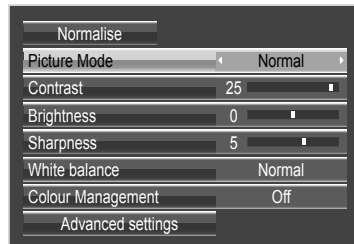
② adjust or select
① select
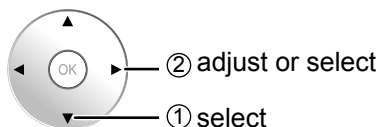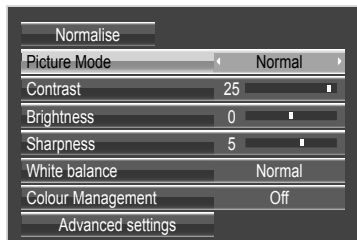
During "Digital" and "Component" input signal.

Normalise	
Picture Mode	◄ Normal ►
Contrast	25
Brightness	0
Colour	6
Hue	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	

4   **Exit the menu.**   MENU   or   RETURN
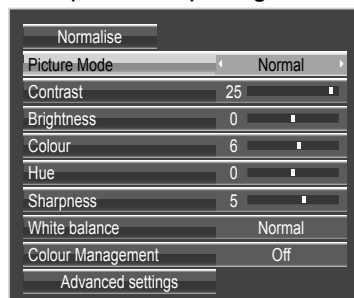
Using **PICTURE** for menu display

To display a menu for adjustment of the Picture menu on the bottom of the screen, press **PICTURE**.

Contrast	◄ 25 ►

② adjust or select
① select
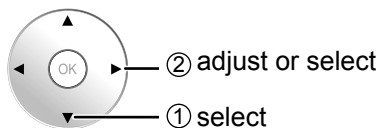
To display a menu for Advanced settings adjustment, press **PICTURE** again.

Black extension	◄ 0 ►

To hide the menu, press **PICTURE** or **RETURN**.

● **Picture Mode**

You can switch to the optimal picture mode for the video source and viewing environment.

Normal ⟷ Dynamic
Monitor ⟷ Cinema
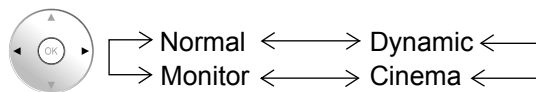
Normal:
For viewing in standard (evening lighting) environments. This menu selects the normal levels of Brightness and Contrast.

Dynamic:
For viewing in brighter environments.
This menu selects higher than normal levels of Brightness and Contrast.

Cinema:
Ideal for movies.

Monitor:
For use when creating broadcast or movie content. With this picture, even if the overall average picture level (APL) changes, the brightness of areas with the same signal level does not change.

Notes:
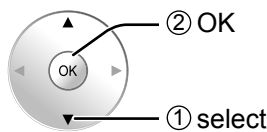• When "Monitor" is selected in Picture Mode, the following menu items cannot be set.
  Picture menu: Contrast
  Screensaver menu: Peak limit (see page 34)
  Setup menu: Power save (see page 36)
• If you would like to change the picture and colour of the selected Picture menu to something else, adjust using the items in the Picture menu. (see next page)

● **Contrast**   Selects the proper brightness and density for the room.

Less   (OK)   More

● **Brightness**   Adjusts for easier viewing of dark pictures such as night scenes and black hair.

Darker   (OK)   Brighter

● **Colour**   Adjusts colour saturation.

Less   (OK)   More

● **Hue**   Adjusts for nice skin colour.

Reddish   (OK)   Greenish

● **Sharpness**   Adjusts picture sharpness.

Less   (OK)   More

● **White balance** Switches to various screen colour tones.
  Normal: Intermediate colour temperature.
  Cool: Colours with a bluish tinge.
  Studio: Optimal colour temperature for studio viewing (3200 K).
  Warm: Colours with a reddish tinge.

(OK) → Normal ⟷ Cool ←
→ Warm ⟷ Studio* ←
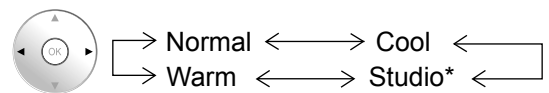
* "Studio" can be modified when "Studio mode" in the Options menu is "On". (see page 41)

● **Colour Management**

  On: Enables colour adjustment automatically.

Off   (OK)   On

  Notes:
  • "Colour" and "Hue" settings cannot be adjusted for "RGB/PC" input signal.
  • You can change the level of each function (Contrast, Brightness, Colour, Hue, Sharpness) for each Picture Mode.
  • The setting details for normal, dynamic and cinema respectively are memorized separately for each input terminal.
  • In Contrast, there is not a noticeable change even when contrast is increased with a bright picture or reduced with a dark picture.

Helpful Hint (Normalise Normalization)

While the "Picture" menu is displayed, if the OK button is pressed during "Normalise", then all adjustment values are returned to the factory settings.

Advanced settings

Enables fine picture adjustment at a professional level.
Notes:
• The adjustment values are memorized separately for each input terminal.
• The adjustment range values should be used as an adjustment reference.

Normalise	
Picture Mode	Normal
Contrast	25
Brightness	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	

OK

Advanced settings	
Normalise	
Black extension	0
Input level	0
Gamma	2.2
AGC	Off
W/B High R	0
W/B High G	0
W/B High B	0
W/B Low R	0
W/B Low G	0
W/B Low B	0
Cinema reality	Off
Studio Gain	Off
Noise reduction	Off

● **Black extension**   Adjusts the dark shades of the image in gradation.

Less ◄ (OK) ► More

● **Input level**   Adjustment of parts which are extremely bright and hard to see.

Less ◄ (OK) ► More

● **Gamma**   Available setting values vary depending on "Picture Mode" settings and the type of input signal, as follows.

Picture Mode	S Curve	1.0	2.0	2.2	2.5	2.6
Normal	–	○*3	○	○	○	○*1
Dynamic	○	○*3	○	○	–	○*1
Cinema	–	○*3	○	○	○*2	○
Monitor	–	○*3	○	○	–	○

*1 When 2k1k signals are received with the Dual Link HD-SDI Terminal Board (TY-FB11DHD), Gamma "2.6" can also be selected.
*2 When 60 Hz signals are received, Gamma "2.5" can also be selected.
*3 When 2k1k signals are received with the Dual Link HD-SDI Terminal Board (TY-FB11DHD), Gamma "1.0" cannot be selected.

Down ◄ (OK) ► Up

● **AGC**   Increases the brightness of dark signal automatically.

Off ◄ (OK) ► On

● **"W/B" adjustment**

W/B High R	0
W/B High G	0
W/B High B	0
W/B Low R	0
W/B Low G	0
W/B Low B	0

Adjusts the white balance for light red, light green or light blue areas.

Adjusts the white balance for dark red, dark green or dark blue areas.

Less ◄ (OK) ► More
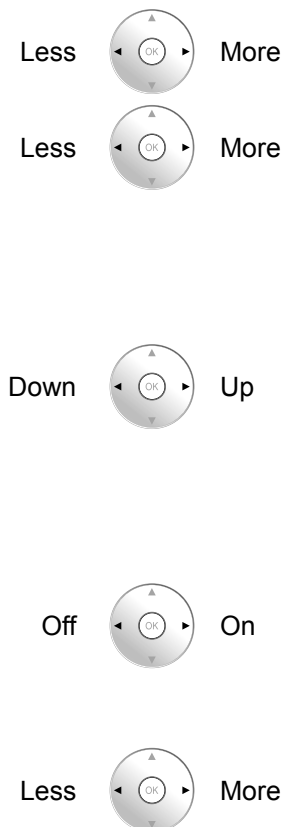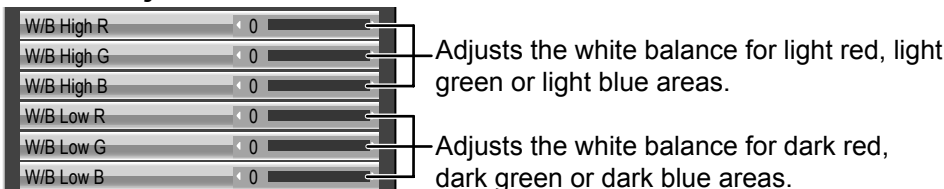
Carry out "W/B" adjustment as follows.
1. Adjust the white balance of the bright sections using the "W/B High R", "W/B High G" and "W/B High B" settings.
2. Adjust the white balance of the dark sections using the "W/B Low R", "W/B Low G" and "W/B Low B" settings.
3. Repeat steps **1** and **2** to adjust.
Steps 1 and 2 affect each other's settings, so repeat each step in turn to make the adjustment.

● **Cinema reality** When "On", the display attempts to reproduce a more natural interpretation of sources such as movie pictures, which are recorded at 24 frames per second. If the picture is not stable, turn the setting to "Off".

Off ◄ (OK) ► On

Note:
When "On", this setting only affects the following signal input:
• 525i (480i), 625i (575i), 1125 (1080) / 60i signal input during "Component" input signal.

● **Studio Gain** Sharpens the contrast for a better view when a part of the image is too light to see.

Off ◄ (OK) ► On

Off: Disables "Studio Gain".
On: Enables "Studio Gain".

Notes:
• "Studio Gain" can be modified when "Studio mode" in the Options menu is "On". When "Studio mode" is "Off", this setting is "Off" and cannot be changed. (see page 41)
• This setting is valid only when the input signals are as follows:
  Component Video, RGB (analog), SDI, HDMI

● **Noise reduction** Sets the following three NR (Noise Reduction) functions together.
  P-NR, Mosquito NR, Block NR

→ Off ↔ Min ←
→ Advanced ↔ Max ↔ Mid ←
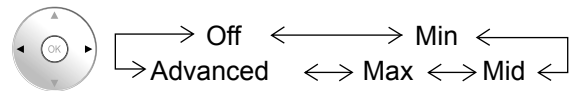
[Advanced NR]
Sets the three NR functions separately.

1 **Select "Advanced".**

Noise reduction	◄ Advanced ►
P-NR	Off
Mosquito NR	Off
Block NR	Off

select

2 **Select the item and set.**

Noise reduction	Advanced
P-NR	◄ Off ►
Mosquito NR	Off
Block NR	Off

② set
① select

→ Off ↔ Min ←
→ Max ↔ Mid ←
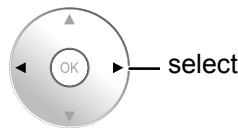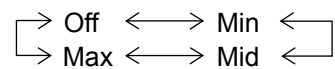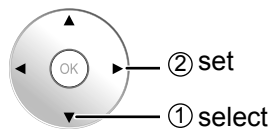
P-NR: Automatically reduces unwanted picture noise.
Mosquito NR: Reduces mosquito noise around subtitles on MPEG videos.
Block NR: Reduces block noise when playing MPEG videos.

Notes:
• "Noise reduction" cannot be adjusted while a PC signal is being applied.
• "Block NR" cannot be adjusted while a HD signal is being applied.

Helpful Hint (Normalise **Normalization)

On the remote control unit, while the "Advanced settings" menu is displayed, if the OK button is pressed during "Normalise", then all adjustment values are returned to the factory settings.

Picture Profiles

Up to 16 combinations of picture adjustment values (in the Picture menu and Advanced settings) can be stored in the display memory as profiles and applied as needed, for a convenient way to enjoy your preferred picture settings.

Normalise	
Picture Mode	Dynamic
Contrast	25
Brightness	0
Colour	6
Hue	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	
Memory save	
Memory load	
Memory edit	

Save profiles(page 25)
Load profiles(page 26)
Edit profiles(page 27)

Onscreen display	On
All Aspect	Off
Studio mode	Off
Function button assign	Scrolling bar
Memory lock	

Lock profiles(page 28, 29)

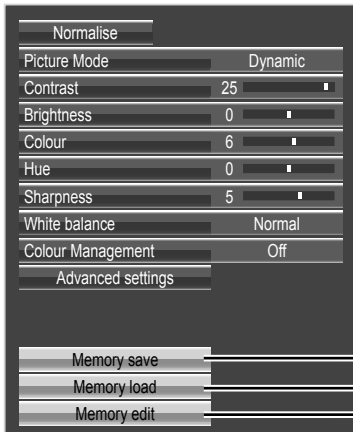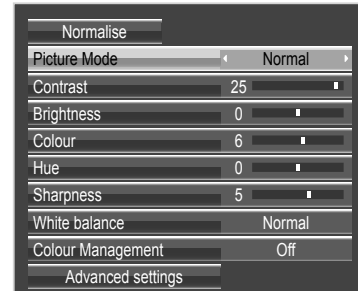| Normalise	
Picture Mode	◄ Normal ►
Contrast	25
Brightness	0
Colour	6
Hue	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	

Save profiles   Save the picture adjustment values in the MEMORY1 profile
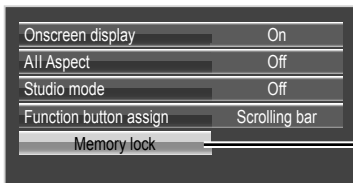
Edit the profile
Delete or rename the profile

My Memory
MEMORY2
MEMORY3
MEMORY4
⋮
🔒1 MEMORY16

Locked profile

MEMORY1
MEMORY2
MEMORY3
MEMORY4
⋮
MEMORY16
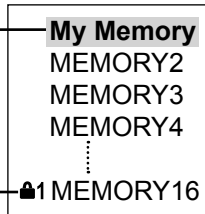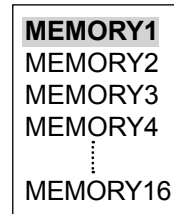
Load the profile   Apply the MEMORY1 profile

Original picture

Custom picture

Normalise	
Picture Mode	◄ Normal ►
Contrast	0
Brightness	0
Colour	0
Hue	0
Sharpness	0
White balance	Normal
Colour Management	Off
Advanced settings	

Normalise	
Picture Mode	◄ Normal ►
Contrast	25
Brightness	0
Colour	6
Hue	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	
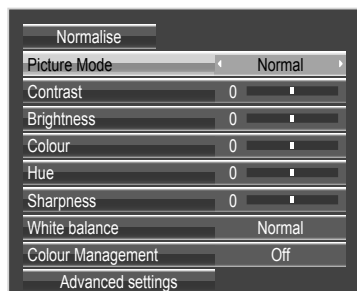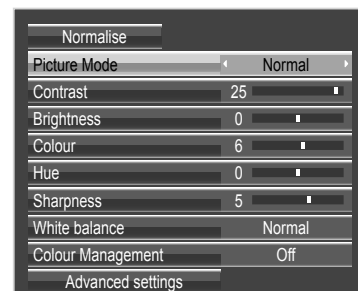
Saving profiles

Follow these steps to save picture adjustment values as profiles.

1 Specify the picture quality in the Picture menu and Advanced settings. (see page 20-23)

2 In the Picture menu, select "Memory save".

Memory save
Memory load
Memory edit

② OK
① select

3 Select a profile name for saving the picture adjustment values.

Memory save
1. [ ] MEMORY1
2. [📁] MEMORY2
3. [🔒1] MEMORY3
4. [ ] MEMORY4
13. [ ] MEMORY13
14. [ ] MEMORY14
15. [ ] MEMORY15
16. [ ] MEMORY16

② OK
① select
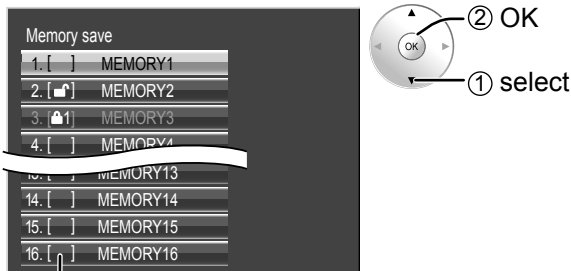
Profiles are labeled with these icons to indicate their locked status. (see page 26)
[ ], [📁]:Settings can be saved in this profile.
[🔒1], [🔒2]:Settings cannot be saved in this profile.

4 Select "Ok".

Memory save
Save the adjusted value in MEMORY1
Ok   Cancel
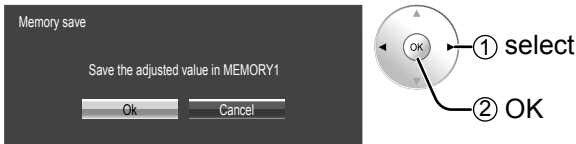
① select
② OK

5 Enter a name for the profile.
[Entering profile names]
Profile names can be up to 16 characters.
To enter text, select characters in the on-screen keyboard.
Edit the default profile name in the text box as desired.

Memory name input
MEMORY1
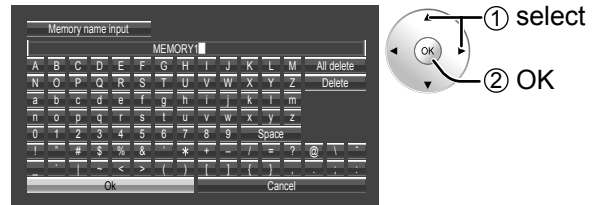
① select
② OK

Example: Specifying "MY PICTURE"

① Select "All delete".
MEMORY1

All text is deleted.
To delete individual characters, select "Delete".

② Select "M".
M

Repeat this process to enter the next character.

③ Select "Y".
MY

④ Select "Space".
MY

6 When you finished entering the profile name, select "Ok".
To cancel saving the profile, select "Cancel".

Memory name input
MY PICTURE
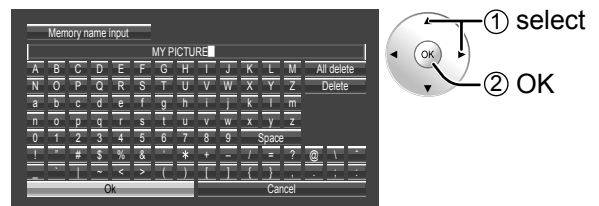
① select
② OK

Loading profiles

Load profiles and apply the picture adjustment values to the display as follows.
Note:
Loaded profiles are stored in memory according to the selected input terminal (SLOT1, 2, 3 or PC IN).

<Loading profiles from the Picture menu>

1 In the Picture menu, select "Memory load".

| Memory save |
| Memory load |
| Memory edit |

② OK
① select

2 Select the profile to load.

1. [🖼]	MEMORY1
2. [🔒1]	MEMORY2
12. [🔒2]	MEMORY12

② OK
① select

Profiles are labeled with these icons to indicate their locked status. (see below)

<Loading profiles from 🔲 MEM. LOAD on the remote control>

1 Press 🔲 MEM. LOAD to list the profiles.

2 Select the profile to load.

1. [🖼]	MEMORY1
2. [🔒1]	MEMORY2
12. [🔒2]	MEMORY12

② OK
① select

Profiles are labeled with these icons to indicate their locked status. (see below)

<Loading profiles directly from the remote control>

To load profiles 1–9

1 Press a button in the range 1 – 9 .

2 Select "Ok".

| Memory load |
| Load from MEMORY2 🔒1 |
| Ok | Cancel |

① select
② OK

To load profiles 10–16
Example: To load profile 16

1 Press -/-- 1 6 .
The profile number is displayed in the upper-right corner of the screen.

| | 16 |

2 Select "Ok".

| Memory load |
| Load from MEMORY16 🔓 |
| Ok | Cancel |

① select
② OK
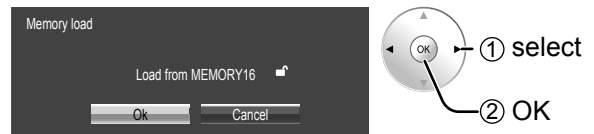
Loading locked profiles…
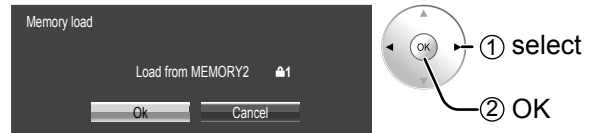In the Picture menu, profiles are labeled with these icons to indicate their locked status.

Normalise	🔒1
Picture Mode	Dynamic
Contrast	25
Brightness	0

🔒1:Lock1
🔒2:Lock2
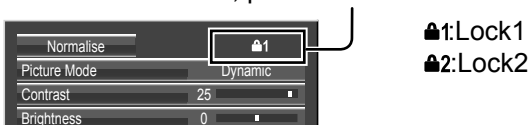
Operations with locked profiles are restricted. (see page 28)
Picture adjustment values in the Picture menu cannot be changed, except for the "Picture Mode". Once you edit the "Picture Mode" setting, you can edit "Contrast", "Brightness", and other picture adjustment values.

🔒1 Lock1
Picture adjustment values are shown.

Normalise	
Picture Mode	Normal
Contrast	25
Brightness	0
Colour	6
Hue	0
Sharpness	5
White balance	Normal
Colour Management	Off
Advanced settings	

Can be specified.

Cannot be specified.

🔒2 Lock2
Picture adjustment values are hidden.

Normalise	
Picture Mode	Normal
Contrast	
Brightness	
Colour	
Hue	
Sharpness	
White balance	
Colour Management	
Advanced settings	

Can be specified.

Cannot be specified.
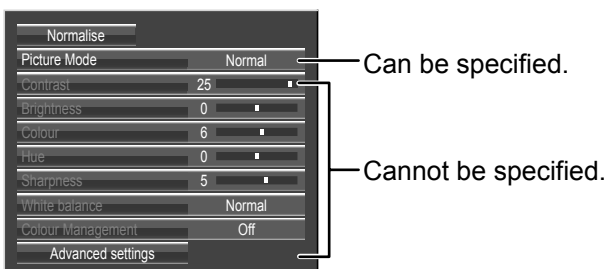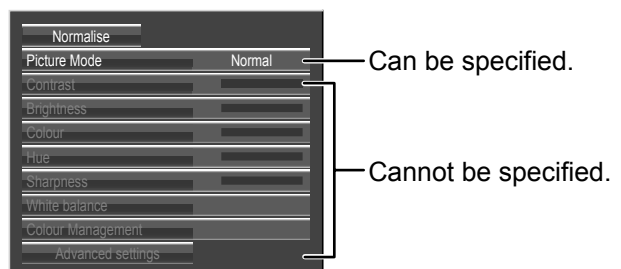
Editing profiles

Delete or rename profiles as follows.

<Deleting profiles>
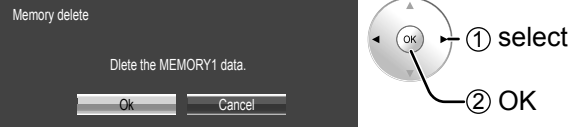
Note:
Locked profiles and profiles currently in use cannot be deleted.

1 In the Picture menu, select "Memory edit".

| Memory save |
| Memory load |
| Memory edit |

② OK
① select

2 Select "Memory delete".

| Memory delete |
| Memory name change |

② OK
① select

3 Select the profile to delete.
To delete all profiles, select "All delete".

| 1. [🔓] | MEMORY1 |
| 2. [🔒] | MEMORY2 |
| All delete |

② OK
① select

4 Select "Ok".

Memory delete

Dlete the MEMORY1 data.

| Ok | Cancel |

① select
② OK

<Renaming profiles>
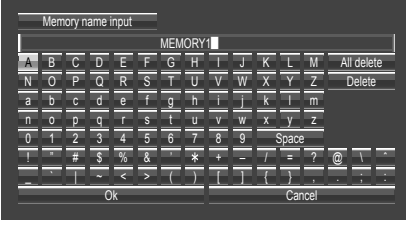
Note:
Locked profiles cannot be renamed.

1 In the Picture menu, select "Memory edit".

| Memory save |
| Memory load |
| Memory edit |

② OK
① select

2 Select "Memory name change".

| Memory delete |
| Memory name change |

② OK
① select

3 Select the profile to rename.

1. [🔓]	MEMORY1
2. [🔒]	MEMORY2
12. [🔒]	MEMORY12

② OK
① select

4 Enter a name for the profile.
Entering profile names ➡ page 25

Memory name input

MEMORY1

A	B	C	D	E	F	G	H	I	J	K	L	M	All delete
N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Delete
a	b	c	d	e	f	g	h	i	j	k	l	m	
n	o	p	q	r	s	t	u	v	w	x	y	z	
0	1	2	3	4	5	6	7	8	9		Space		
!	#	$	%	&		*	+	−	/	=	?	@	\	~	
		~	<	>	(	)	[	]	{	}			

| Ok | Cancel |
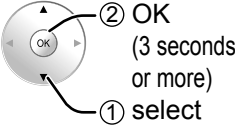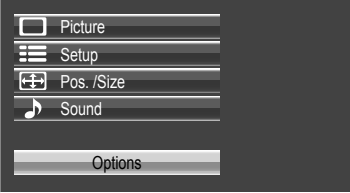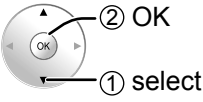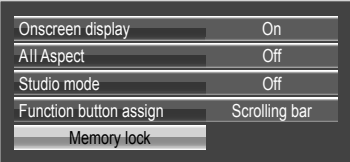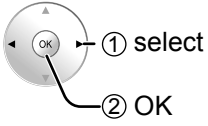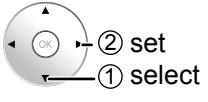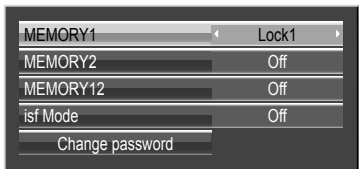
5 When you finished entering the profile name, select "Ok".
To cancel renaming the profile, select "Cancel".

| Ok | Cancel |

① select
② OK

Locking profiles

You can lock saved profiles to restrict operations when the profiles are loaded. You can also set passwords.

<Locking and unlocking profiles>
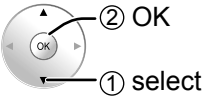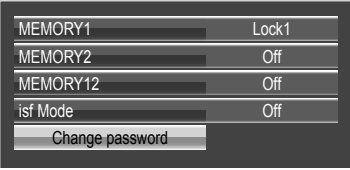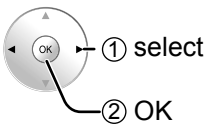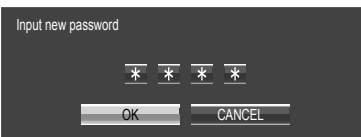
1 Display the menu screen.

2 Select "Options" and hold ⊙ for 3 seconds or more.

▢ Picture	
☰ Setup	
⊞ Pos. /Size	
♪ Sound	
Options	

② OK
(3 seconds or more)
① select

3 Select "Memory lock".

Onscreen display	On
All Aspect	Off
Studio mode	Off
Function button assign	Scrolling bar
Memory lock	

② OK
① select

4 Enter a 4-digit password. The default password is "0123".

1	2	3
4	5	6
7	8	9
	0	

5 Select "OK".

Input password

✳ ✳ ✳ ✳

OK   CANCEL

① select
② OK

6 Select the profile and specify the desired lock setting.

MEMORY1	◄ Lock1 ►
MEMORY2	Off
MEMORY12	Off
isf Mode	Off
Change password	

② set
① select

7 Exit the menu.

MENU or RETURN ●

Once a profile is locked, the following operations are restricted when the profile is loaded.

Setting	Editing the Profile (Memory edit)	Editing Picture Adjustment Values via the Menu (Picture menu, Advanced settings)	Saving Picture Adjustment Values (Memory save)
Off (unlocked)	Allowed	Allowed	Allowed
Lock1	Prohibited	Prohibited (picture adjustment values are shown)	Allowed
Lock2	Prohibited	Prohibited (picture adjustment values are hidden)	Prohibited

<Changing passwords>

1 Follow steps 1–5 in the previous procedure, <Locking and unlocking profiles>.

2 Select "Change password".

MEMORY1	Lock1
MEMORY2	Off
MEMORY12	Off
isf Mode	Off
Change password	

② OK
① select

3 Enter a new 4-digit password.

1	2	3
4	5	6
7	8	9
	0	

4 Select "OK".

Input new password

✳ ✳ ✳ ✳

OK   CANCEL

① select
② OK

5 Exit the menu.

MENU or RETURN ●

Note:
Make a note of the new password to remember it.

<isf Mode Setting>

Switches to "Picture Mode" mode display.

1 Follow steps 1–5 in the previous procedure,
  <Locking and unlocking profiles>.

2 Select "isf Mode".

MEMORY1	Lock1
MEMORY2	Off
MEMORY12	Off
isf Mode	Off
Change password	

② set
① select
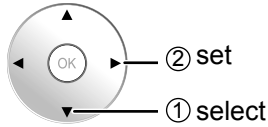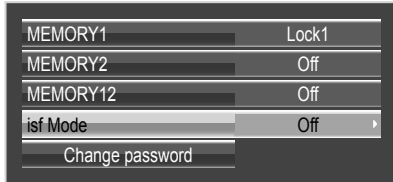
3 Specify "On" or "Off".

4 Exit the menu.

MENU or ● RETURN

Specifying "On" for isf Mode changes the "Picture Mode" mode display as follows.

"Picture Mode" mode display

Normalise	
Picture Mode	Normal
Contrast	25
Brightness	0
Colour	6
Hue	0
Sharpness	5
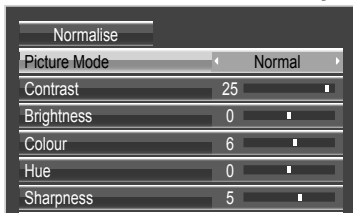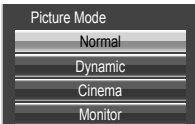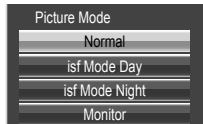
isf Mode: Off	isf Mode: On
Normal	Normal
Dynamic	isf Mode Day
Cinema	isf Mode Night
Monitor	Monitor

Mode display when VIDEO MENU is selected

isf Mode: Off	isf Mode: On
Picture Mode	Picture Mode
Normal	Normal
Dynamic	isf Mode Day
Cinema	isf Mode Night
Monitor	Monitor

Adjusting Pos. /Size

1 **Display the menu screen.**
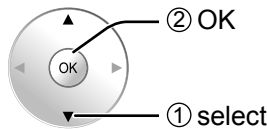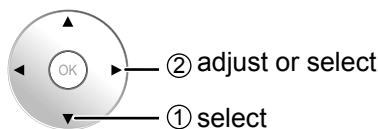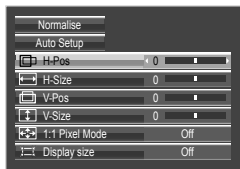
MENU

During "Digital", "SDI" and "HDMI" input signal.

Normalise	
Auto Setup	
H-Pos	0
H-Size	0
V-Pos	0
V-Size	0
1:1 Pixel Mode	Off
Display size	Off

2 **Select "Pos. /Size".**

Picture	
Setup	
Pos. /Size	
Sound	

② OK

OK

① select

3 **Select the item and set.**

Normalise	
Auto Setup	
H-Pos	0
H-Size	0
V-Pos	0
V-Size	0
1:1 Pixel Mode	Off
Display size	Off

② adjust or select

OK

① select

During "Component", "RGB" and "PC" input signal.

Normalise	
Auto Setup	
H-Pos	0
H-Size	0
V-Pos	0
V-Size	0
Dot Clock	0
Clock Phase	-16
1:1 Pixel Mode	Off
Display size	Off

4 **Exit the menu.**

MENU or RETURN

Using POS. /SIZE for menu display

To display a menu for adjustment of the Pos. /Size menu on the bottom of the screen, press POS. /SIZE

H-Pos	0

② adjust or select

OK

① select the menu
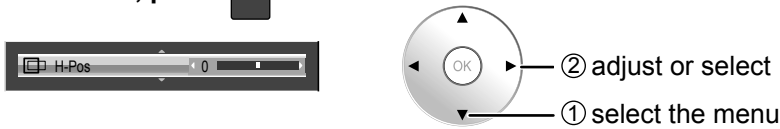
To hide the menu, press POS. /SIZE or RETURN .

Notes:
• Unadjustable items are grayed out.
  Adjustable items differ depending on the input signal and the display mode.
• Adjustment details are memorized separately for different input signal formats (Adjustments for component signals are memorized for 525 (480) / 60i • 60p, 625 (575) / 50i • 50p, 1125 (1080) / 60i • 50i • 60p • 50p • 24p • 25p • 30p • 24sF, 1250 (1080) / 50i, 750 (720) / 60p • 50p each, and RGB/PC/Digital signals are memorized for each frequency.)
• If a "Cue" or "Rew" signal from a VCR or DVD player is received, the picture position will shift up or down. This picture position movement cannot be controlled by the Picture Pos./Size function.

● **Auto Setup**

Automatically adjust H-Pos / V-Pos / Clock Phase / Dot Clock and set H-Size / V-Size the standard value when RGB signal is input.

Notes:
• If the dot clock frequency is 162 MHz or higher, Dot Clock cannot be made.
• If the image is that the edge is hardly figured out or shadowy, that cannot be adjusted automatically. In such case, press Auto Setup again after changing the image to the clearer one.
• When DVI-D is input, Clock Phase cannot be adjusted automatically.
• Select Normalise in Pos. /Size and press the OK button when appropriate adjustment cannot be made.

● **H-Pos** Adjust the horizontal position.
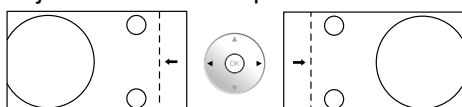
● **V-Pos** Adjust the vertical position.
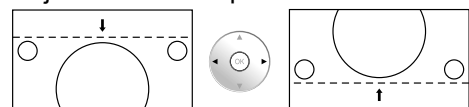
● **H-Size** Adjust the horizontal size.
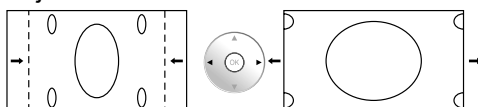
● **V-Size** Adjust the vertical size.
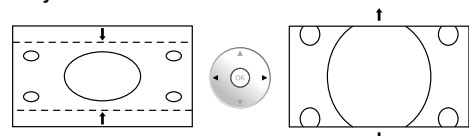
● **Dot Clock**

(During "Component", "RGB" and "PC" input signal)
Periodic striped pattern interference (noise) may occur when a striped pattern is displayed.
If this happens, adjust so that any such noise is minimized.

● **Clock Phase**

(During "Component", "RGB" and "PC" input signal)
Eliminate the flickering and distortion.

● **1:1 Pixel Mode**

Adjusts the display size when 1125i, 1125p or 1250i signal is input.
Notes:
• Select On when you would like to replay 1920 × 1080 input signal.
• Applicable input signal;
  1125 (1080) / 50i • 60i • 24sF • 24p • 25p • 30p • 50p • 60p, 1250 (1080) / 50i
• Select Off when flickering is shown around the image.
• H-Size, V-Size and Dot Clock cannot be adjusted when On is selected.

Off   On
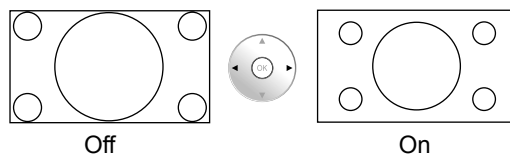
● **1:1 Pixel Mode (2k1k)**
(For 2k1k signals)

When the input signal is a 2k1k signal (2048 × 1080 / 24p, 2048 × 1080 / 24sF), the display size is adjusted as follows.

Off   On (left)   On (Centre)   On (Right)
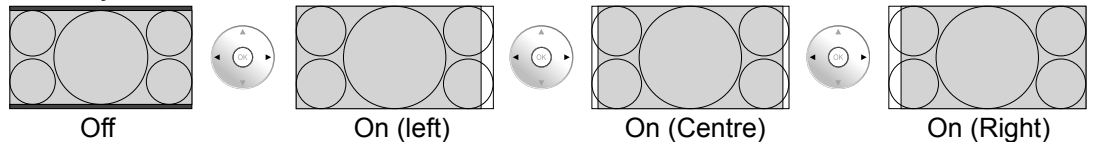
Note:
2k1k signals can only be received when the Dual Link HD-SDI Terminal Board (TY-FB11DHD) is installed.

● **Display size**

Adjusts the image display size on screen.
Off: Sets the normal image display size on screen.
On: Sets the image display size approximately 95 % of the normal image display.

Off   On
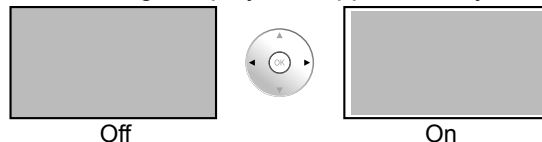
Notes:
• "Display size" can be modified when "Studio mode" in the Options menu is "On". When "Studio mode" is "Off", this setting is "Off" and cannot be changed. (see page 41)
• This setting is valid only when the input signals are as follows;
  525i, 525p, 625i, 625p, 750/60p, 750/50p, 1125/60i, 1125/50i, 1125/24sF, 1125/25p, 1125/24p, 1125/30p, 1125/60p, 1125/50p, 1250/50i (Component Video, RGB, DVI, SDI, HDMI)
• When "Display size" is set to "On", "H-Pos" and "V-Pos" in "Pos. /Size" can be adjusted.
• Refer to each board's operating instruction for DVI, SDI, HDMI's corresponding signals.

Helpful Hint (Normalise Normalization)

While the Pos. /Size display is active, if the OK button is pressed during "Normalise", then all adjustment values are returned to the factory settings.

Sound Adjustment

1 **Display the menu screen.**

MENU

2 **Select "Sound"**

```
□  Picture
☰  Setup
⊞  Pos. /Size
♪  Sound
```

② OK

OK

① select

```
     Normalise
Sound Mode      ◄    Normal    ►
Bass              0    ▪
Mid               0    ▪
Treble            0    ▪
Balance           0    ▪
Surround              Off
Volume          1▮
```

3 **Select the item and set.**

```
     Normalise
Sound Mode      ◄    Normal    ►
Bass              0    ▪
Mid               0    ▪
Treble            0    ▪
Balance           0    ▪
Surround              Off
Volume          1▮
```

② adjust or select

OK

① select

4 **Exit the menu.**

MENU or RETURN
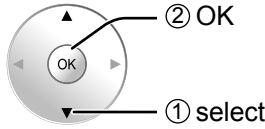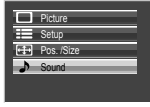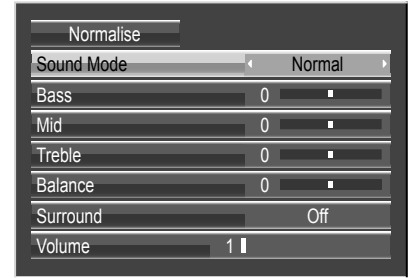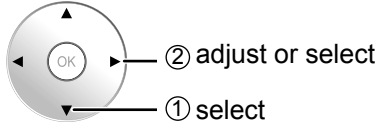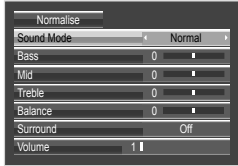
Item	Details
Sound Mode	**Normal:** Emits the original sound. **Dynamic:** Accentuates sharp sound. **Clear:** Attenuates human voice.
Bass	Adjusts low pitch sounds.
Mid	Adjusts normal sounds.
Treble	Adjusts high pitch sounds.
Balance	Adjusts left and right volumes.
Surround	Select On or Off. The benefits of surround sound are enormous. You can be completely enveloped in sound; just as if you were at a concert hall or cinema.
Volume	Adjusts the sound volume level.

Note: Bass, Mid, Treble and Surround settings are memorized separately for each Sound Mode.

Helpful Hint (Normalise Normalisation)

While the "Sound" menu is displayed, if the OK button is pressed during "Normalise", then all adjustment values are returned to the factory settings.

SDI Sound Output

This menu is displayed when HD-SDI Terminal Board with audio (TY-FB10HD) or Dual Link HD-SDI Terminal Board (TY-FB11DHD) is installed to the unit.

```
♪ SDI Sound Output         2/2
Left Channel     ◄  Channel 1  ►
Right Channel       Channel 2
Sound Out           On
Level Meter         Off
```
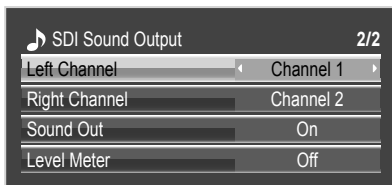
Note:
This menu is available only when selecting a slot that HD-SDI Terminal Board with audio (TY-FB10HD) or Dual Link HD-SDI Terminal Board (TY-FB11DHD) is installed.

Item	Details
Left Channel	**Channel 1 to Channel 16** Selects left audio channel.
Right Channel	**Channel 1 to Channel 16** Selects right audio channel.
Sound Out	**On ⟷ Off** **On:** Enables audio output. **Off:** Disables audio output.
Level Meter	**Off ⟷ 1-8ch ⟷ 9-16ch** Sets audio channels to show in the audio level meter. 8 channels are displayed in the audio level meter; 4 channels each on both right and left sides of the display. **Off:** Hides the audio level meter. **1-8ch**: Displays the audio level meter (1-8ch) **9-16ch:** Displays the audio level meter (9-16ch)

Screensaver (For preventing image retention)

Do not display a still picture, especially in 4:3 mode, for any length of time.
If the display must remain on, a Screensaver should be used.

1 **Display the menu screen.**

2 **Select "Setup".**

🖵	Picture
☰	Setup
⊞	Pos. /Size
♪	Sound

MENU

② OK
① select

Screensaver	
Start	
Function	◄ Negative image ►
Side panel	High
Wobbling	Off
Peak limit	Off

3 **Select "Screensaver".**

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off
Standby save	On
Power management	Off

② OK
① select
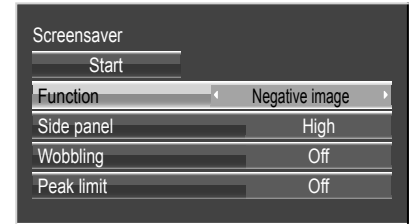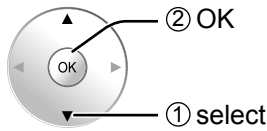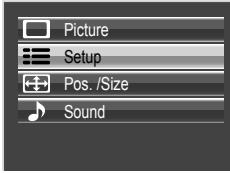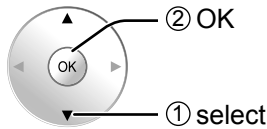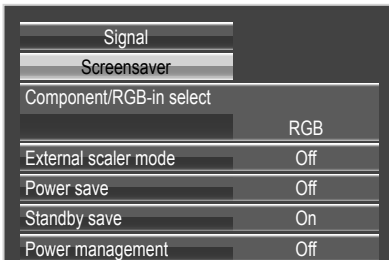
4 **Function selection**

Select "Function" and select the desired function.

Screensaver	
Start	
Function	◄ Negative image ►
Side panel	High
Wobbling	Off
Peak limit	Off

② change
① select

Negative image ⟷ Scrolling bar only
White screen ⟷ Overlay scrolling bar
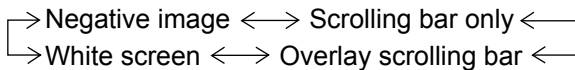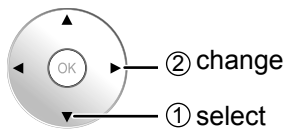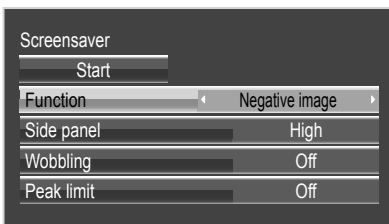
Negative image : Negative image will be displayed on the screen.
Scrolling bar only : A white bar will scroll from left to right. The image won't be displayed.
Overlay scrolling bar : The brightness of the image will be decreased and a white bar will scroll on it.
White screen : The whole screen will be white.

5 **Start setting**

Select "Start".

Screensaver	
Start	
Function	Negative image
Side panel	High
Wobbling	Off
Peak limit	Off

① select
② OK
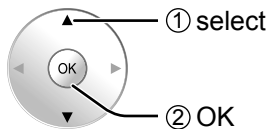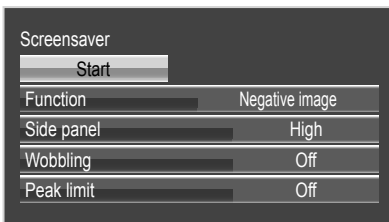
The menu screen will disappear and the Screensaver will be activated.
To stop the Screensaver under On, press RETURN or any buttons on the main unit.
Note: When the display is turned off, the Screensaver will be deactivated.

Reduces screen image retention

These functions prevent the occurrence of an "image retention" on the display when turned ON.

Wobbling: Automatically shifts the display image (therefore unnoticeable to the eye) to prevent image retention of sharper contour of image.

On1: Shifts the image every 30 seconds.

On2: Shifts the image at a dot level pitch depending on screen-detection.

Peak limit: Suppresses image contrast (peak brightness).

Note: When a still picture is viewed for an extended time, the screen may become slightly darker. (see page 45)

1 **Select "Wobbling" or "Peak limit".**

2 **Select "On1", "On2" or "Off" (Wobbling).**
Select "On" or "Off" (Peak limit).

Screensaver	
Start	
Function	Negative image
Side panel	High
Wobbling	◀ Off ▶
Peak limit	◀ Off ▶

② change
① select
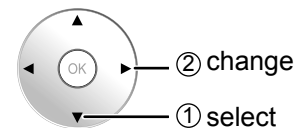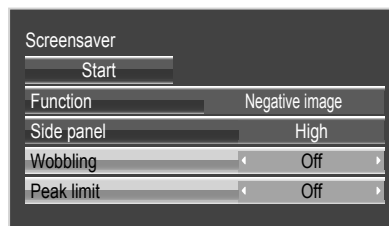
Side Panel Adjustment

Do not display a picture in 4:3 mode for an extended period, as this can cause an image retention to remain on the side panels either side of the display field.
To reduce the risk of such an image retention, illuminate the side panels.
This function may be applicable to the non-picture area.

Side panel

4:3
Screen Display
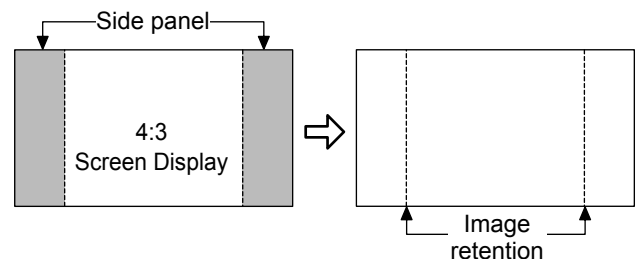
Image retention

1 **Select "Side panel".**

2 **Adjust the menu.**

Screensaver	
Start	
Function	Negative image
Side panel	◀ High ▶
Wobbling	Off
Peak limit	Off

② change
① select

→ Off ⟷ Low ⟷ Mid ⟷ High ⟵
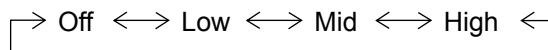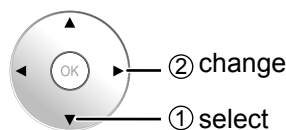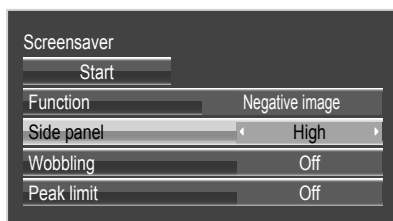
3 **Exit from Screensaver.**

MENU or RETURN

Notes:
• To reduce the occurrence of image retention, set the "Side panel" to "High".
• The side panels may flash (alternate black / white) depending on the picture being shown on the screen. Using Cinema mode will reduce such flashing.

Specifying the scaler

This menu can be used to specify whether the built-in scaler or an external scaler is used for scaler functions such as resizing and picture quality adjustment.
The setting is valid with the following input signals.
1125 (1080) / 24p•25p•30p•50p•60p

1 **Display the menu screen.**

MENU

2 **Select "Setup".**

☐	Picture
☰	Setup
⊞	Pos. /Size
♪	Sound

② OK
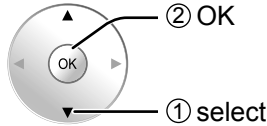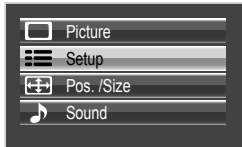
① select

3 **Select "External scaler mode" and set.**

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	◄ Off ►
Power save	Off
Standby save	On
Power management	Off
Auto power off	Off
OSD design	Type1
OSD position	Upper left
OSD Language	English (UK)

② change
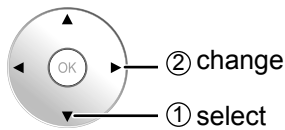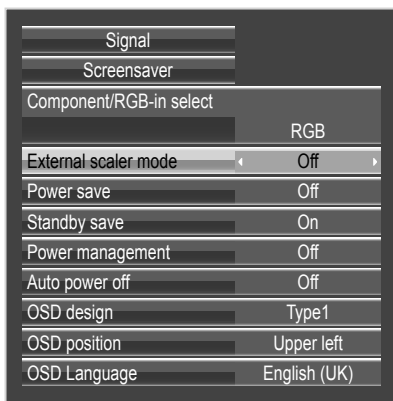
① select

Off ⟷ On
Off: Use the built-in scaler.
On: Use an external scaler.

Note:
Selecting "On" in this setting deactivates the following settings and disables these operations.
Pos. /Size menu: H-Size, V-Size, 1:1 Pixel Mode, Display size
(see page 30, 31)
Picture menu: Brightness, Colour, Hue, Sharpness, Memory save, Memory load (see page 21, 25, 26)
Advanced settings: Cinema reality, Noise reduction (see page 23)
Signal menu: XGA Mode (see page 39)
Options menu: All Aspect (see page 41)
ASPECT Controls (see page 17)
"EXT. SCALER" is displayed in the menu screen to indicate that an external scaler is in use.

Normalise	EXT.SCALER
Picture Mode	◄ Normal ►
Contrast	25 ▪
Brightness	
Colour	
Hue	

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	◄ Off ►
Power save	Off
Standby save	On
Power management	Off
Auto power off	Off
OSD design	Type1
OSD position	Upper left
OSD Language	English (UK)

4 **Exit the menu.**

MENU or ● RETURN
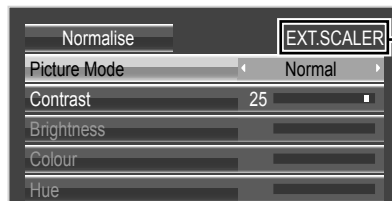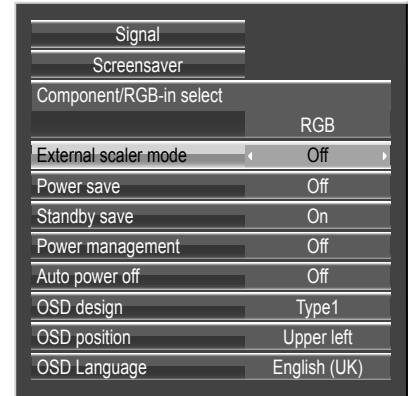
Reduces power consumption

1 **Display the menu screen.**

MENU

2 **Select "Setup".**

▢	Picture
▤	Setup
⊞	Pos. /Size
♪	Sound

② OK
① select

3 **Select the item and set.**

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off
Standby save	On
Power management	Off
Auto power off	Off
OSD design	Type1
OSD position	Upper left
OSD Language	English (UK)

② change
① select

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off
Standby save	On
Power management	Off
Auto power off	Off
OSD design	Type1
OSD position	Upper left
OSD Language	English (UK)

4 **Exit the menu.**

MENU or RETURN

● **Power save**
When this function is turned On, luminous level of the Plasma Display is suppressed, so power consumption is reduced.

● **Standby save**
When this function is turned On, power consumption of the microcomputer is reduced during power supply standby (see page 12, 14, 15), so standby power of the set is reduced.

● **Power management**
When this function is set to On, it operates under the following conditions to turn the power on or off automatically.
When no pictures (HD/VD sync signals) are detected for 30 or so seconds during PC IN signal input:
→ Power is turned off (standby); the power indicator lights up orange.
When pictures (HD/VD sync signals) are subsequently detected:
→ Power is turned on; the power indicator lights up green.
Notes:
• This function operates only during PC IN signal input.
• This function is effective when "Sync" is set to "Auto" and "Component / RGB-in select" is set to "RGB".

● **Auto power off**
Equipment power supply is turned Off when there is no signal.
When this is set to On, the power supply of the unit goes Off 10 minutes after the input signals stop.
Note:
This function is effective for input signals except PC IN terminal.

Customizing the On-Screen Menu Display

Specify the background colour and display position of on-screen menus as follows.

1 **Display the menu screen.**

MENU

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off
Standby save	On
Power management	Off
Auto power off	Off
OSD design	◄ Type1 ►
OSD position	◄ Upper left ►
OSD Language	English (UK)

2 **Select "Setup".**

Picture
Setup
Pos. /Size
Sound

② OK
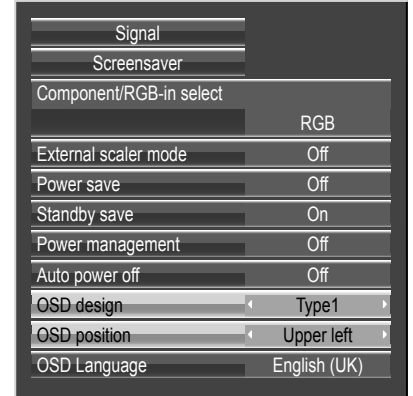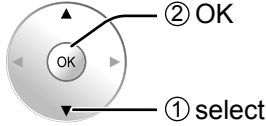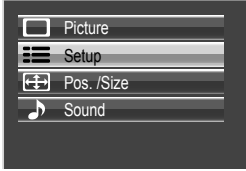
① select

3 **Specify the background colour.**

Select "OSD design" and choose the background colour (transparency).

Standby save	On
Power management	Off
Auto power off	Off
OSD design	◄ Type1 ►
OSD position	Upper left
OSD Language	English (UK)

② change

① select

→ Type1 ⟷ Type2 ⟷ Type3 ←
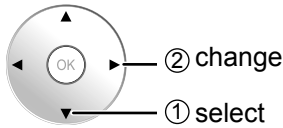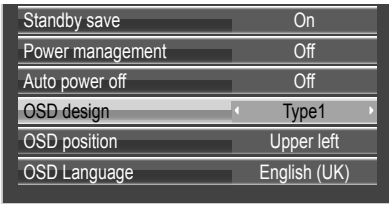
4 **Specify the display position.**

Select "OSD position" and choose the display position.

Standby save	On
Power management	Off
Auto power off	Off
OSD design	Type1
OSD position	◄ Upper left ►
OSD Language	English (UK)
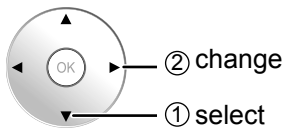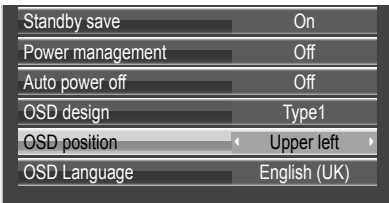
② change

① select

Each time you press ◄ or ►, the on-screen menu display position changes.
Display example

Upper left

Centre

5 **Exit the menu.**

MENU or RETURN

37
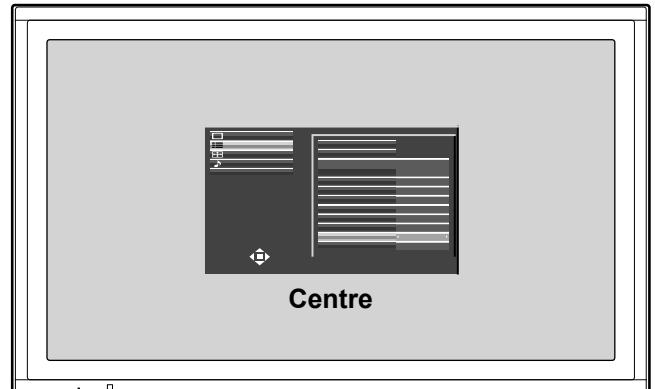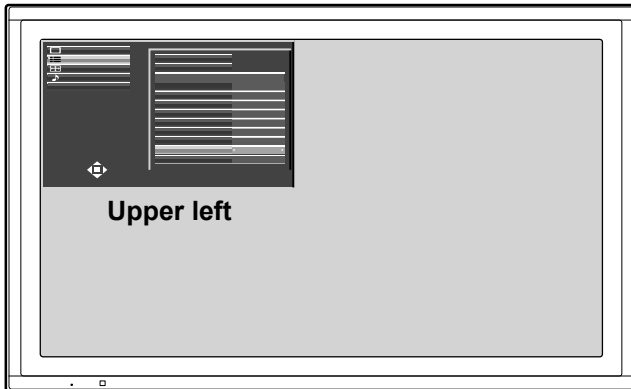
Setup for Input Signals

Component / RGB-in select

Select to match the signals from the source connected to the Component / RGB input terminals.
Y, P_B, P_R signals ➡ "Component"
RGB signals ➡ "RGB"

1 **Display the menu screen.**

MENU

2 **Select "Setup".**

🖵 Picture	
☰ Setup	
⊞ Pos. /Size	
♪ Sound	

② OK
① select
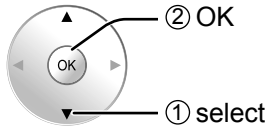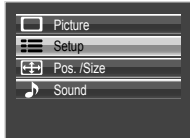
3 **Select "Component / RGB-in select" and set.**
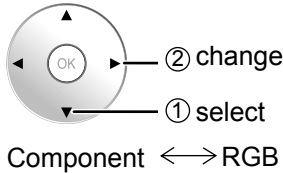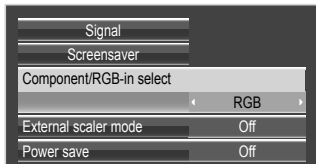
Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off

② change
① select

Component ⟷ RGB

4 **Exit the menu.**

MENU or RETURN

Notes:
• Selection may not be possible, depending on which optional board is installed.
• Make setting of the selected input terminal (SLOT1, SLOT2, SLOT3 or PC IN).

YUV / RGB-in select

Select to match the signals from the source connected to the DVI input terminals.
YUV signals ➡ "YUV"
RGB signals ➡ "RGB"

1 **Display the menu screen.**

MENU

2 **Select "Setup".**

🖵 Picture	
☰ Setup	
⊞ Pos. /Size	
♪ Sound	

② OK
① select
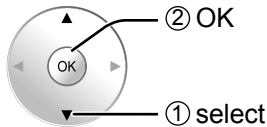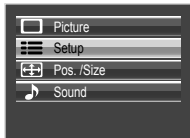
3 **Select "YUV / RGB-in select" and set.**
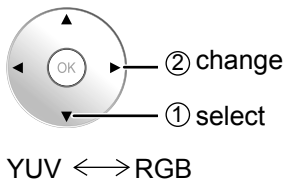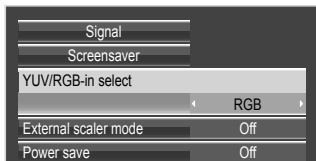
Signal	
Screensaver	
YUV/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off

② change
① select

YUV ⟷ RGB

4 **Exit the menu.**

MENU or RETURN

Notes:
• Selection may not be possible, depending on which optional board is installed.
• Make setting of the selected input terminal (SLOT1 or SLOT2).

Signal menu

Note:
"Signal" setup menu displays a different setting condition for each input signal.

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off
Standby save	On
Power management	Off
Auto power off	Off
OSD design	Type1
OSD position	Upper left
OSD Language	English (UK)

OK →

For RGB

Signal	[RGB]
Sync	◄ Auto ►
XGA Mode	1024 ×768
H-Freq.	33.7 kHz
V-Freq.	60.0 Hz
Signal Format	1125(1080)/60i

For Component

Signal	[Component]
XGA Mode	◄ 1024 ×768 ►
H-Freq.	33.7 kHz
V-Freq.	60.0 Hz
Signal Format	1125(1080)/60i

For Digital

Signal	[Digital]
H-Freq.	33.7 kHz
V-Freq.	60.0 Hz
Dot Clock Freq.	108.0 MHz
Signal Format	1125(1080)/60i

XGA Mode

This menu is displayed when the input signal is analog (Component/PC). This unit supports three types of XGA signals with 60Hz vertical frequency having different aspect ratios and sampling rates (1,024 × 768 @ 60Hz, 1,280 × 768 @ 60Hz, and 1,366 × 768 @ 60Hz). Be sure to make settings in accordance with the input signal in order to achieve a more appropriate and attractive display.
In addition, after making this setting, be sure to make each adjustment (such as "Auto Setup") on the "Pos. /Size" menu as necessary. (see page 30)

Signal	[Component]
XGA Mode	◄ 1024 ×768 ►

② change

① select

→ 1024×768 ←→ 1280×768 ←→ 1366×768 ←

Setup for Input Signals

Sync

Select Signal from the "Setup" menu during RGB input signal.

Signal	[RGB]
Sync	Auto
XGA Mode	1024 ×768

② change
① select

Auto ⟷ on G ⟷ VBS
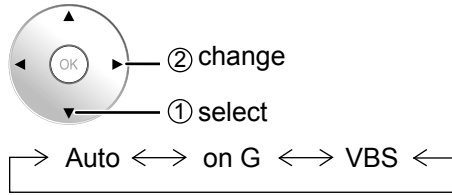
Setting RGB sync signal:

Confirm that the input is set to RGB input (this setting is valid only for RGB input signal).

Auto: The H and V sync or synchronized signal are automatically selected. If both input, it is selected the H and V sync.
on G: Uses a synchronized signal on the Video G signal, which is input from the G connector.
VBS: Uses a synchronized signal of Composite Sync input, which is input from the HD connector.

SDI Through

Set the active through function of the Dual Link HD-SDI Terminal Board (TY-FB11DHD).
Note:
Settings can only be performed for this menu when a slot mounted with a Dual Link HD-SDI Terminal Board (TY-FB11DHD) is selected.

Signal	[Digital]
SDI Through	Off

② change
① select

Off ⟷ On
On: Enables active through.
Off: Disables active through.
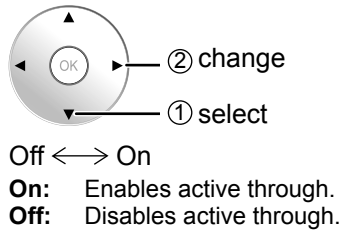
Input signal display

Displays the frequency and the type of the current input signal.

This display is valid only for Component / RGB / PC and Digital input signal.
Display range:
Horizontal 15 - 110 kHz
Vertical 48 - 120 Hz

The dot clock frequency is displayed during digital signal input.

H-Freq.	33.7	kHz
V-Freq.	60.0	Hz
Signal Format	1125(1080)/60i	

H-Freq.	33.7	kHz
V-Freq.	60.0	Hz
Dot Clock Freq.	108.0	MHz
Signal Format	1125(1080)/60i	

Options Adjustments

1 **Display the menu screen.**

MENU

2 **Select "Options".**

3 **Press ⊙ for more than 3 seconds.**

☐	Picture
☰	Setup
⊞	Pos. /Size
♪	Sound
	Options

② OK (more than 3 seconds)

① select

Onscreen display	On ▶
All Aspect	Off
Studio mode	Off
Function button assign	Scrolling bar
Memory lock	

4 **Select the item and set.**

Onscreen display	On ▶
All Aspect	Off
Studio mode	Off
Function button assign	Scrolling bar
Memory lock	

② set

① select

5 **Exit the menu.**

MENU or RETURN

Item	Adjustments
Onscreen display	**On:** Displays all the following on screen. • Power on display • Input signal switch display • No signal display • Mute after RECALL was pressed. **Off:** Hides all the items above from view.
All Aspect	Sets All Aspect mode (advanced aspect setting) or default aspect mode. With each press of ASPECT button, the aspect changes in the selected mode. **Off:** Default aspect mode **On:** All Aspect mode Aspect mode of each setting is as follows: (Example: HD signal) **Off** 4:3→4:3 Full→Zoom1→Zoom2→Zoom3→16:9→14:9→Just **On** 4:3 (1)→4:3 (2)→4:3 Full→Zoom1→Zoom2→Zoom3→16:9→14:9→Just1→Just2
Studio mode	For switching functions in setting menus used for television studio applications. <table><tr><td></td><td>**Studio mode: On**</td><td>**Studio mode: Off**</td></tr><tr><td>**White balance**</td><td>"Studio" can be selected.</td><td>"Studio" not available.</td></tr><tr><td>**Studio Gain**</td><td>Can be switched On and Off.</td><td>Cannot be specified (set to "Off" and cannot be changed).</td></tr><tr><td>**Display size**</td><td>Can be switched On and Off.</td><td>Cannot be specified (set to "Off" and cannot be changed).</td></tr></table>
Function button assign	Specifies the function activated when the FUNCTION button on the remote control is pressed. **Scrolling bar:** Activates the Scrolling bar only screensaver. After 15 minutes, the display enters standby mode. **Test patterns:** Each time you press ⊙, a different test pattern is displayed (seven in all).
Memory lock	Locks or unlocks saved profiles. Also for setting passwords. (see page 28)

Watching Videos and DVDs

If you have applicable equipment connected to the Display, you can easily watch videos and DVDs using the Display's remote control.
You can select the external equipment to access.
To operate other manufacturers' equipment, you need to register the code for the equipment.

1 **Select the input mode.**

INPUT
- HDMI1
- HDMI2
- HDMI3
- HDMI4
- COMPONENT
- PC

∧ INPUT ∨   HDMI 1 2 3 4   COMPO.
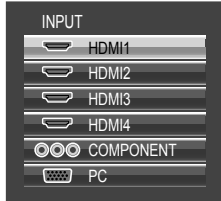
2 **Select the remote control mode.**
Press the key to select.

DISPLAY   VCR   DBS/CBL   DVD

3 **Operate the connected equipment, pointing Display's remote control at the equipment.**
Example

	VCR MODE	DVD MODE
●	VCR Record	Record
⏮ ⏭	–	Skip Reverse/Forward
◀◀ ▶▶	Rewind/Fast Forward	Reverse/Forward
■	Stop	Stop
⏸/▶	Pause	Pause
▶	Play	Play
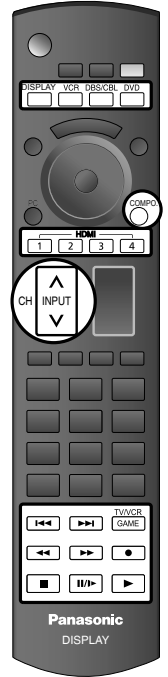
Programming the Remote to Operate Peripheral Equipment

You can operate other manufacturers' equipment using this Display's remote control.

1 **Connect the external equipment to the Display and Power Off the external equipment.**

2 **Press both buttons simultaneously for more than 3 seconds.**
Release the buttons when the equipment selection buttons start flashing.

3 **Select the equipment.**
The selected button remains lit (other buttons are not lit).

4 **Input the equipment's 4-digit remote control code.**
(see page 47, 48)

5 **Operate the equipment with the remote control.**
(see page 47)
The external equipment turns On.

Press to return to the Display mode. DISPLAY
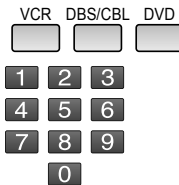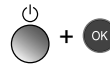
■ If the equipment does not operate with the remote control

• When your equipment has a single code
 ➡ Input the remote control code again
• When your equipment has multiple codes
 ➡ Change the code with **4** above and test again

Note:
Registration will fail if the wrong code is input or it takes more than 30 seconds to register.

To find a code not listed in the code list

This procedure searches all codes and is called the "sequence method."

1 After step **3** above, change the code and test.

change ➡
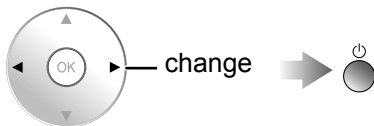
Operate the equipment with the remote control.
(see page 47)

• Repeat until the code is found.
• It may take many attempts before the correct code is found.

2 When the correct code is found.
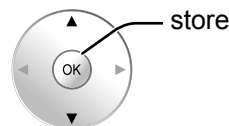
store

Shipping condition

This function allows you to reset the unit to the factory setting.

1 **Display the menu screen.**

2 **Select "Setup".**

▯	Picture
☰	Setup
⊞	Pos. /Size
♪	Sound

MENU

▲
OK ►
▼

② OK
① select

3 **Select "OSD Language".**

Signal	
Screensaver	
Component/RGB-in select	
	RGB
External scaler mode	Off
Power save	Off
Standby save	On
Power management	Off
Auto power off	Off
OSD design	Type1
OSD position	Upper left
OSD Language	◄ English (UK) ►

▲
◄ OK ►
▼

① select

4 **Press ⊙ for more than 5 seconds.**

OK

5 **Select "YES".**

Reset to factory default.

YES   NO

▲
◄ OK ►
▼
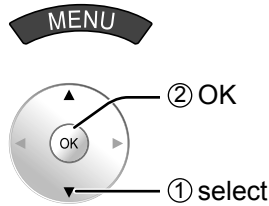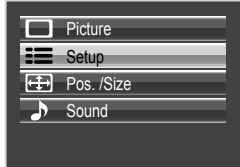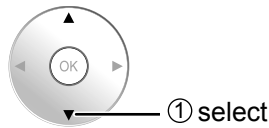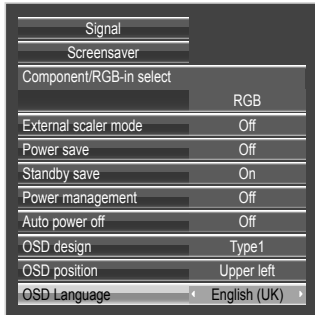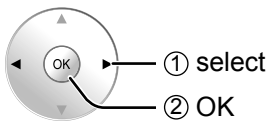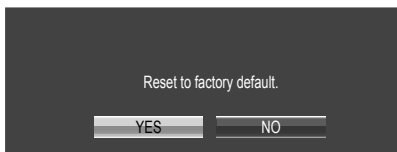
① select
② OK

6 **Select "YES" and wait for 10 sec.**

All saved data will be erased
CONTINUE?

YES   NO

▲
◄ OK ►
▼
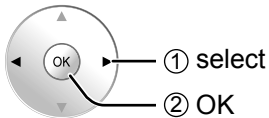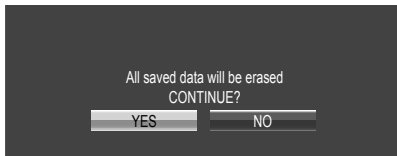
① select
② OK

Note:
Press ⏺ (RETURN) to return to Setup menu when confirmation screen is displayed.

[from the unit]
1 Press the MENU button till the Setup menu is displayed.
2 Press the ▲ or ▼ button to select "OSD Language".
3 Press the ENTER button for more than 5 seconds.
4 Press the ▲ or ▼ button to select "YES".
5 Press the ENTER button.
6 Press the ▲ or ▼ button to select "YES".
7 Press the ENTER button and wait for 10 sec.

Executing this function restores all settings and adjustment values in the following menus to the factory-set default values, as shipped.

On-screen menu: Picture, Advanced settings, Setup, Pos. /Size, Sound, Options
Unlocking profiles (Memory lock: Off, Password: 0123)

Troubleshooting
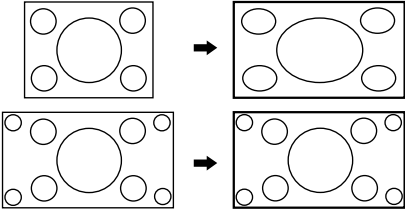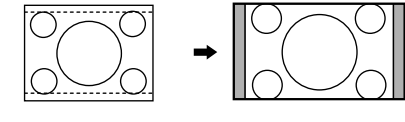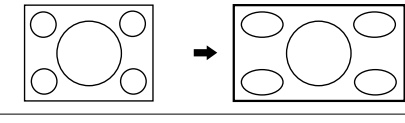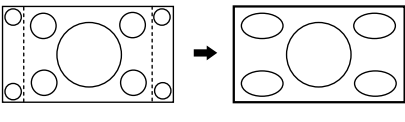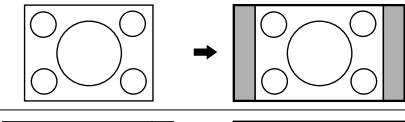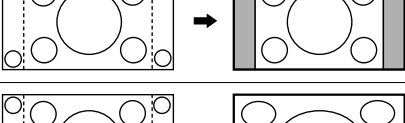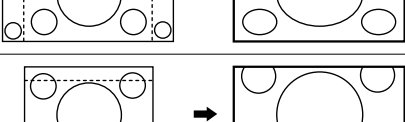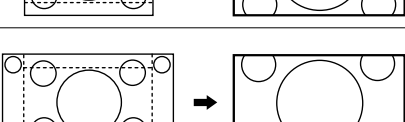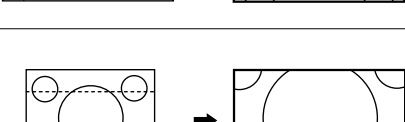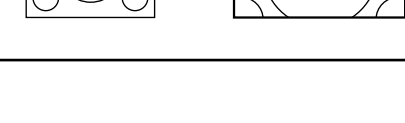
Before you call for service, determine the symptoms and make a few simple checks as shown below.

Symptoms				Checks
Picture		**Sound**		
[picture icon]	Interference	[sound icon]	Noisy Sound	Electrical Appliances Cars / Motorcycles Fluorescent light
[picture icon]	Normal Picture	[sound icon]	No Sound	Volume (Check whether the mute function has been activated on the remote control.)
?	No Picture	[sound icon]	No Sound	Not plugged into AC outlet Not switched on Picture and Brightness/Volume setting (Check by pressing the power switch or stand-by button on the remote control.)
?	No Picture	[sound icon]	Normal Sound	If a signal with a non-applicable colour system format, or frequency is input, only the input terminal indication is displayed.
[picture icon]	No Colour	[sound icon]	Normal Sound	Colour controls set at minimum level (see page 20-23)
No remote control operations can be performed.				Check whether the batteries have discharged completely and, if they have not, whether they were inserted properly. Check whether the remote control sensor is exposed to an outdoor light or a strong fluorescent light. Check whether the remote control designed specifically for use with the unit is being used. (The unit cannot be operated by any other remote control.)
A cracking sound is sometimes heard from the unit.				If there is nothing wrong with the picture or sound, this is the sound of the cabinet undergoing very slight contractions in response to changes in the room temperature. There are no adverse effects on the performance or other aspects.
The top or bottom of the picture on the screen is cut off when I use the zoom function.				Adjust the position of the picture on the screen.
Areas at the top and bottom of the screen where the image is missing appear when I use the zoom function.				When using a video software program (such as a cinema size program) with a screen wider than one in the 16:9 mode, blank areas separate from the images are formed at the top and bottom of the screen.
I can hear sounds coming from inside the unit.				When the power is turned on, a sound of the display panel being driven may be heard: This is normal and not indicative of malfunctioning.
This Plasma Display uses special image processing. Hence a slight time lag may occur between image and audio, depending on the type of input signal. However, this is not a malfunction.				

Plasma Display panel

Symptoms	Check
The screen darkens slightly when bright pictures with minimal movements are shown.	The screen will darken slightly when photos, still images of a computer or other pictures with minimal movements are shown for an extended period. This is done to reduce image retention on the screen and the shortening of the screen's service life: It is normal and not indicative of malfunctioning.
It takes a while for the picture to appear.	The unit digitally processes the various signals in order to reproduce esthetically pleasing images. As such, it sometimes takes a few moments for the picture to appear when the power has been turned on, when the input has been switched.
The edges of the images flicker.	Due to the characteristics of the system used to drive the panel, the edges may appear to flicker in the fast-moving parts of the images: This is normal and not indicative of malfunctioning.
The brightness on both sides of images in the 4:3 mode changes.	When viewing the side panels at the "High" or "Mid" setting, the brightness on both sides may change depending on the kind of program shown: This is normal and not indicative of malfunctioning.
Some parts of the screen do not light up.	The plasma display panel is manufactured using an extremely high level of precision technology, however, sometimes some parts of the screen may be missing picture elements or have luminous spots. This is not a malfunction.
[Example image] Image retention appears	Do not allow a still picture to be displayed for an extended period, as this can cause a permanent image retention to remain on the Plasma Display. Examples of still pictures include logos, video games, computer images, teletext and images displayed in 4:3 mode. **Note:** The permanent image retention on the Plasma Display resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.
Whirring sounds can be heard from the display unit.	The display unit is fitted with a cooling fan to dissipate heat generated during normal use. The whirring sound is caused by rotation of the fan and is not a malfunction.

List of Aspect Modes

Aspect mode		Picture ➡ Enlarged screen	Description
All Aspect: On	Factory setting All Aspect: Off		
16:9	16:9		The display of the pictures fills the screen. In the case of SD signals, pictures with a 4:3 aspect ratio are enlarged horizontally, and displayed. This mode is suited to displaying anamorphic pictures with a 16:9 aspect ratio.
14:9	14:9		Letterbox pictures with a 14:9 aspect ratio are enlarged vertically and horizontally so that their display fills the screen vertically and is slightly smaller than the screen horizontally. The top and bottom edges of the pictures are cut off. Side panels are displayed at the left and right edges of the screen.
Just / Just1	Just		Pictures with a 4:3 aspect ratio are enlarged horizontally so that the picture distortion is minimized. The display of the areas around the left and right edges of the screen is slightly elongated.
Just2	–		The pictures with a 4:3 aspect ratio among the 16:9 aspect ratio signals are enlarged horizontally so that the picture distortion is minimized. The left and right edges of the pictures are cut off. The display of the areas around the left and right edges of the screen is slightly elongated.
4:3 / 4:3 (1)	4:3		Pictures with a 4:3 aspect ratio are displayed with their original aspect ratio. Side panels are displayed at the left and right edges of the screen.
4:3 (2)	–		The pictures with a 4:3 aspect ratio among the 16:9 aspect ratio signals are displayed with their original aspect ratio. The left and right edges of the pictures are masked with side panels.
4:3 Full	4:3 Full		The pictures with a 4:3 aspect ratio among the 16:9 aspect ratio signals are enlarged horizontally so that their display fills the screen. The left and right edges of the pictures are cut off.
Zoom / Zoom1	Zoom1		Letterbox pictures with a 16:9 aspect ratio are enlarged vertically and horizontally so that their display fills the screen. The top and bottom edges of the pictures are cut off.
Zoom2	Zoom2		The letterbox pictures with a 2.35:1 aspect ratio among the 16:9 aspect ratio signals are enlarged vertically and horizontally so that their display fills the screen. The top and bottom edges as well as the left and right edges of the pictures are cut off.
Zoom3	Zoom3		Letterbox pictures with a 2.35:1 aspect ratio are enlarged vertically and horizontally so that their display fills the screen vertically and is slightly larger than the screen horizontally. The top and bottom edges as well as the left and right edges of the pictures are cut off.

Remote Control Operation / Code List

The following explains how to operate external devices with the Display's remote control.
Register the remote control codes (page 43) if you want to operate an external device from another manufacturer.
(see page 47, 48)

Note:
Operation may not be possible depending on the available memory size of the remote control.
This remote control is not designed to cover operation of all functions of all models.

Remote Control Operation List

This chart defines which keys are operational after programming (if needed) while in the selected remote control mode, CABLE, DBS, VCR, or DVD.

KEY NAME	VCR MODE	DBS/CBL MODE		DVD MODE
		(DBS)	(CBL)	
(power)	Power	Power	Power	Power
MENU	—	Menu	Menu	Functions
RETURN	—	PPV/VOD	PPV/VOD	Return
(navigation)	—	Up/Down/Left/Right	Up/Down/Left/Right	Up/Down/Left/Right
(OK)	—	Select	Select	Enter
CH INPUT	Channel Up/Down	Channel Up/Down	Channel Up/Down	Channel Up/Down
0 - 9	0-9	0-9	0-9	0-9
(skip)	—	Page Down/Up	Page Down/Up	Skip Reverse/Forward
TV/VCR	TV/VCR Switch	TV/DBS Switch	TV/CBL Switch	—
(rew/ff)	Rewind/Fast Forward	Rewind/Fast Forward	Rewind/Fast Forward	Reverse/Forward
(record)	Record	Record *1	Record *1	Record
(stop)	Stop	Stop	Stop	Stop
(pause)	Pause	Pause	Pause	Still/Pause
(play)	Play	Play	Play	Play

*1: Combination type

Remote Control Code List

DBS / CABLE (Cable Set Top Box) DBS/CBL

Brand	Code	Brand	Code	Brand	Code	Brand	Code
ABC	0003, 0008, 0014, 0017	GoldStar	0144	Paragon	0000	Starcom	0003
Americast	0899	Hamlin	0009, 0273	Philips	0317, 1305	Supercable	0276
Amino	1602, 1822	i3 Micro	1602	Pioneer	0144, 0533, 0877, 1877	Supermax	0883
Bell & Howell	0014	Jerrold	0003, 0012, 0014, 0276, 0476, 0810	Pulsar	0000	Thomson	1256
Bell South	0899			Quasar	0000	Tocom	0012
Clearmaster	0883	Memorex	0000	RadioShack	0883	Torx	0003
ClearMax	0883	Motorola	0276, 0476, 0810, 1106, 1187, 1254, 1376	RCA	1256	Toshiba	0000
Coolmax	0883			Regal	0273, 0279	Tristar	0883
Digeo	1187	Multitech	0883	Runco	0000	V2	0883
Digi	0637	Myrio	1602, 1822	Samsung	0144	Viewmaster	0883
Director	0476	Pace	0008, 0237, 1877	Scientific Atlanta	0008, 0017, 0477, 0877, 1877	Vision	0883
Dumont	0637	Panasonic	0000, 0107, 1786	Sejin	1602	Vortex View	0883
General Instrument	0003, 0276, 0476, 0810	Panther	0637	Sony	1006	Zenith	0000, 0525, 0899

DBS / CABLE (Satellite Set Top Box) DBS/CBL

Brand	Code	Brand	Code	Brand	Code	Brand	Code
AlphaStar	0772	GE	0566	Memorex	0724	Sony	0639, 1639, 1640
Century	0856	General Instrument	0869	Mitsubishi	0749	Star Choice	0869
Chaparral	0216	GOI	0775, 1775	Motorola	0869	Tivo	1142, 1442, 1443, 1444, 1538, 1539
Crossdigital	1109	Gradiente	0856	Next Level	0869		
DirecTV	0099, 0247, 0392, 0566, 0639, 0724, 0749, 0819, 1076, 1108, 1109, 1142, 1377, 1392, 1414, 1442, 1443, 1444, 1538, 1539, 1609, 1639, 1640, 1749, 1856	Hisense	1535	Panasonic	0247, 0701	Toshiba	0749, 0790, 1285, 1749
		Hitachi	0819, 1250	Paysat	0724	UltimateTV	1392, 1640
		HTS	0775, 1775	Philips	0099, 0722, 0724, 0749, 0856, 1076, 1142, 1442, 1749	Uniden	0724, 0722
		Hughes Network Systems	0749, 1142, 1442, 1443, 1444, 1538, 1539, 1749			US Digital	1535
Dish Network System	0775, 1005, 1170, 1171, 1505, 1775			Proscan	0392, 0566	USDTV	1535
		Humax	1790	Proton	1535	Voom	0869
Dishpro	0775, 1005, 1505, 1775	iLo	1535	RadioShack	0869	Zenith	0856, 1856
Echostar	0775, 1005, 1170, 1171, 1505, 1775	JVC	0775, 1170, 1775	RCA	0566, 0855, 0143, 1392		
		LG	1226, 1414	Samsung	1108, 1109, 1276, 1377, 1442, 1609		
Expressvu	0775, 1775	Magnavox	0724, 0722				

Remote Control Code List (Continued)

VCR

Brand	Code	Brand	Code	Brand	Code	Brand	Code
ABS	1972	Gradiente	0000	Nikko	0037	Singer	0072
Admiral	0048, 0209	Harley Davidson	0000	Niveus Media	1972	Sonic Blue	0614, 0616, 1615, 1616
Adventura	0000	Harman/Kardon	0038, 0081	Noblex	0240	Sony	0000, 0032, 0033, 0035, 0636, 1032, 1232, 1972
Aiko	0278	Harwood	0072	Northgate	1972		
Aiwa	0000, 0037, 0124	Hewlett Packard	1972	Olympus	0035	Stack 9	1972
Akai	0041	HI-Q	0047	Optimus	0037, 0048, 0104, 0162, 0432, 0593, 1062, 1162, 1262	STS	0042
Alienware	1972	Hitachi	0000, 0041, 0042, 0089			Sylvania	0000, 0035, 0043, 0081, 0593, 1593, 1781
America Action	0278	Howard Computers	1972	Orion	0002, 0184, 0209, 0479, 1479		
American High	0035	HP	1972	Panasonic	0035, 0162, 0225, 0614, 0616, 1035, 1062, 1162, 1262	Symphonic	0000, 0593, 1593
Asha	0240	Hughes Network Systems	0042, 0739, 0740, 0745, 1239, 1240			Systemax	1972
Audiovox	0037, 0278			Penney	0035, 0037, 0038, 0042, 0240, 1035, 1237	Tagar Systems	1972
Beaumark	0240	Humax	0739			Tatung	0041
Bell & Howell	0104	Hush	1972	Pentax	0042	Teac	0000, 0041
Broksonic	0002, 0121, 0184, 0209, 0479, 1479	iBUYPOWER	1972	Philco	0035	Technics	0035, 0162
		Jensen	0041	Philips	0035, 0081, 0618, 0739, 1081, 1181	Teknika	0000, 0035, 0037
Calix	0037	JVC	0041, 0067	Pilot	0037	Thomas	0000
Canon	0035	KEC	0037, 0278	Pioneer	0067	Tivo	0618, 0636, 0739, 0740, 0745, 1239, 1240, 1503, 1996
Carver	0081	Kenwood	0038, 0041, 0067	Polk Audio	0081		
CCE	0072, 0278	KLH	0072	Presidian	1593	TMK	0240
Citizen	0037, 0278, 1278	Kodak	0035, 0037	Profitronic	0240	Toshiba	0043, 0045, 0845, 1008, 1145, 1503, 1972, 1996
Colt	0072	LG	1037	Proscan	0060, 1060		
Craig	0037, 0047, 0072, 0240	Linksys	1972	Protec	0072	Totevision	0037, 0240
Curtis Mathes	0035, 0041, 0060, 0162, 1035	Lloyd's	0000	Pulsar	0039	Touch	1972
Cybernex	0240	Logik	0072	Quasar	0035, 0162, 1035, 1162	Unitech	0240
CyberPower	1972	LXI	0037	RadioShack	0000, 1037	Vector	0045
Daewoo	0045, 0278, 1278	Magnasonic	0593, 1278	Radix	0037	Vector Research	0038
Dell	1972	Magnavox	0000, 0035, 0039, 0081, 0149, 0563, 0593, 1593, 1781	Randex	0037	Video Concepts	0045
Denon	0042			RCA	0042, 0060, 0149, 0240, 0807, 0880, 1035, 1060	Videomagic	0037
DirecTV	0739, 0740, 0745, 1239, 1240	Magnin	0240			Videosonic	0240
Durabrand	0038, 0039	Marantz	0035, 0081	Realistic	0000, 0035, 0037, 0047, 0048, 0104	Viewsonic	1972
Dynatech	0000	Marta	0037			Villain	0000
Electrohome	0037	Media Center PC	1972	ReplayTV	0614, 0616, 1615, 1616	Voodoo	1972
Electrophonic	0037	MEI	0035	Ricavision	1972	Wards	0000, 0035, 0042, 0047, 0048, 0060, 0072, 0081, 0149, 0240
Emerex	0032	Memorex	0000, 0035, 0037, 0039, 0047, 0048, 0104, 0162, 0209, 0240, 0479, 1037, 1162, 1237, 1262	Runco	0039		
Emerson	0000, 0002, 0037, 0043, 0121, 0184, 0209, 0278, 0479, 0593, 1278, 1479, 1593			Samsung	0045, 0240, 0739, 1014	White Westinghouse	0072, 0209
				Sanky	0039, 0048	XR-1000	0000, 0035, 0072
				Sansui	0000, 0041, 0067, 0209, 0479, 1479	Yamaha	0038
Fisher	0047, 0104	MGA	0240, 0043			Zenith	0000, 0033, 0039, 0209, 0479, 1479
Fuji	0033, 0035	MGN Technology	0240	Sanyo	0047, 0104, 0240		
Funai	0000, 0593, 1593	Microsoft	1972	Scott	0043, 0045, 0121, 0184	ZT Group	1972
Garrard	0000	Mind	1972	Sears	0000, 0035, 0037, 0042, 0047, 0104, 1237		
Gateway	1972	Minolta	0042				
GE	0035, 0060, 0240, 0807, 1035, 1060	Mitsubishi	0043, 0067, 0807	Sharp	0048, 0807, 0848		
		Motorola	0035, 0048	Shintom	0072		
Go Video	0432, 0614	MTC	0000, 0240	Shogun	0240		
GoldStar	0037, 0038, 1237	Multitech	0000, 0072				
		NEC	0038, 0041, 0067, 0104				

DVD Recorder / Player

Brand	Code	Brand	Code	Brand	Code	Brand	Code
Accurian	1072, 1416	Fisher	0670	Marantz	0539	Sanyo	0670, 0695, 0873
Advent	1016	Funai	0675, 1268, 1334	Memorex	0695, 0831, 1270	Sensory Science	1158
Aiwa	0641	Gateway	1073, 1077, 1158, 1194	Microsoft	0522, 1708	Sharp	0630, 0675, 0752, 1256
Akai	0695, 0770, 0899, 1089	GE	0522, 0815, 0717	Mintek	0717, 0839	Sharper Image	1117
Alco	0790	Go Video	0715, 0741, 0744, 0783, 0833, 0869, 1044, 1075, 1099, 1158, 1304, 1730	Mitsubishi	0521, 1521	Sherwood	0633, 0770, 1043, 1077
Allegro	0869			Momitsu	1082	Shinsonic	0533, 0839
Amphion Media Works	0872			NAD	0741	Sonic Blue	0869, 1099
Apex Digital	0672, 0717, 0755, 0794, 0796, 0797, 0830, 1004, 1020, 1056, 1061, 1100	Go Vision	1071, 1072	NEC	0785	Sony	0533, 0864, 1033, 1070, 1431, 1533
		GoldStar	0741	Nesa	0717		
		Greenhill	0717	Next Base	0826	Sova	1122
Arrgo	1023	Harman/Kardon	0582, 0702	NexxTech	1402	Superscan	0821
Aspire Digital	1168, 1407	Hitachi	0573, 0664, 1247	Norcent	0872, 1003, 1107, 1265	SVA	0860, 1105
Audiovox	0790, 1071, 1072, 1121, 1122	Hiteker	0672	Onkyo	0503, 0627, 0792	Sylvania	0675, 0821, 1268
Axion	1071, 1072	Humax	1588	OptoMedia Electronics	0896	Symphonic	0675, 0821
Blaupunkt	0717	iLo	1348	Oritron	0651	Teac	0790
Blue Parade	0571	Initial	0717	Panasonic	0490, 0703, 1362, 1462, 1490, 1762, 1779, 2060, 2061, 2062	Technics	0490, 0703
Broksonic	0695, 0868	Insignia	1268			Technosonic	0730
Cinea	0831	Integra	0627	Philips	0503, 0539, 0646, 0675, 0854, 1260, 1267, 1354	Theta Digital	0571
CineVision	0833, 0869, 0876	JBL	0702			Toshiba	0503, 0695, 1045, 1154, 1588, 1769
Citizen	0695, 1277	Jensen	1016	Pioneer	0525, 0571, 0631		
Coby	0778, 0852, 1086, 1107, 1165, 1177	JSI	1423	Polaroid	1020, 1061, 1086	Tredex	0800
		JVC	0558, 0623, 0867, 1164	Polk Audio	0539	Urban Concepts	0503
Craig	0831	jWin	1049	Portland	0770	US Logic	0839
Curtis Mathes	1087	Kawasaki	0790	Presidian	0675, 1072	Venturer	0790
CyberHome	0816, 0874, 1023, 1024, 1117, 1129, 1502	Kenwood	0490, 0534	Prima	1016	Vizio	1064, 1226
		KLH	0717, 0790, 1020, 1149	Proscan	0522	Xbox	0522, 1708
Daewoo	0705, 0784, 0833, 0869, 1169, 1172, 1234, 1242, 1441	Konka	0711, 0719, 0720	ProVision	0778	Yamaha	0490, 0539, 0545
		Koss	0651, 0896, 1423	Qwestar	0651	Zenith	0503, 0591, 0741, 0869
Denon	0490, 0634	Landel	0826	RCA	0522, 0571, 0717, 0790, 0822, 1022, 1132, 1769	Zoece	1265
Desay	1407	Lasonic	0798, 1173			AMW	0872
Disney	0675, 1270	Lenoxx	1127	Rio	0869		
Dual	1068, 1085	LG	0591, 0741, 0801, 0869	Rotel	0623		
Durabrand	1127	LiteOn	1058, 1158, 1416, 1440	Rowa	0823		
DVD2000	0521	Loewe	0511, 0885	Sampo	0698, 0752		
Emerson	0591, 0675, 0821, 1268	Magnavox	0503, 0539, 0646, 0675, 0821, 1268	Samsung	0199, 0490, 0573, 0820, 0899, 1044, 1075		
Enterprise	0591						
ESA	0821, 1268	Malata	0782, 1159	Sansui	0695		

Applicable Input Signals

	Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	Component / RGB / Mini D-sub 15P (Dot clock (MHz))	DVI-D *8 (Dot clock (MHz))
1	525 (480) / 60i	15.73	59.94	* (13.5)	
2	525 (480) / 60p	31.47	59.94	* (27.0) *5	* (27.0)
3	625 (575) / 50i	15.63	50.00	* (13.5)	
4	625 (575) / 50p	31.25	50.00	* (27.0)	
5	625 (576) / 50p	31.25	50.00		* (27.0)
6	750 (720) / 60p	45.00	60.00	* (74.25)	* (74.25)
7	750 (720) / 50p	37.50	50.00	* (74.25)	* (74.25)
8	1,125 (1,080) / 60p	67.50	60.00	* (148.5) *1	* (148.5)
9	1,125 (1,080) / 60i	33.75	60.00	* (74.25) *1	* (74.25)
10	1,125 (1,080) / 50p	56.26	50.00	* (148.5) *1	* (148.5)
11	1,125 (1,080) / 50i	28.13	50.00	* (74.25) *1	* (74.25)
12	1,125 (1,080) / 24sF	27.00	48.00	* (74.25) *2	
13	1,125 (1,080) / 30p	33.75	30.00	* (74.25) *1	* (74.25)
14	1,125 (1,080) / 25p	28.13	25.00	* (74.25) *1	* (74.25)
15	1,125 (1,080) / 24p	27.00	24.00	* (74.25) *1	* (74.25)
16	1,250 (1,080) / 50i	31.25	50.00	* (74.25) *3	
17	2,048 × 1,080 / 24sF *7	27.00	48.00		
18	2,048 × 1,080 / 24p *7	27.00	24.00		
19	640 × 400 @70 Hz	31.46	70.07	* (25.17)	
20	640 × 480 @60 Hz	31.47	59.94	* (25.18) *6	* (25.18)
21	640 × 480 @72 Hz	37.86	72.81	* (31.5)	
22	640 × 480 @75 Hz	37.50	75.00	* (31.5)	
23	640 × 480 @85 Hz	43.27	85.01	* (36.0)	
24	800 × 600 @56 Hz	35.16	56.25	* (36.0)	
25	800 × 600 @60 Hz	37.88	60.32	* (40.0)	* (40.0)
26	800 × 600 @72 Hz	48.08	72.19	* (50.0)	
27	800 × 600 @75 Hz	46.88	75.00	* (49.5)	
28	800 × 600 @85 Hz	53.67	85.06	* (56.25)	
29	852 × 480 @60 Hz	31.47	59.94	* (33.54) *6	* (34.24)
30	1,024 × 768 @50 Hz	39.55	50.00		* (51.89)
31	1,024 × 768 @60 Hz	48.36	60.00	* (65.0)	* (65.0)
32	1,024 × 768 @70 Hz	56.48	70.07	* (75.0)	
33	1,024 × 768 @75 Hz	60.02	75.03	* (78.75)	
34	1,024 × 768 @85 Hz	68.68	85.00	* (94.5)	
35	1,066 × 600 @60 Hz	37.64	59.94	* (53.0)	* (53.0)
36	1,152 × 864 @60 Hz	53.70	60.00		* (81.62)
37	1,152 × 864 @75 Hz	67.50	75.00	* (108.0)	
38	1,280 × 768 @60 Hz	47.70	60.00	* (80.14)	
39	1,280 × 960 @60 Hz	60.00	60.00	* (108.0)	
40	1,280 × 960 @85 Hz	85.94	85.00	* (148.5)	
41	1,280 × 1,024 @60 Hz	63.98	60.02	* (108.0)	* (108.0)
42	1,280 × 1,024 @75 Hz	79.98	75.03	* (135.0)	
43	1,280 × 1,024 @85 Hz	91.15	85.02	* (157.5)	
44	1,366 × 768 @50 Hz	39.55	50.00		* (69.92)
45	1,366 × 768 @60 Hz	48.36	60.00	* (86.71)	* (87.44)
46	1,400 × 1,050 @60 Hz	65.22	60.00		* (122.61)
47	1,600 × 1,200 @60 Hz	75.00	60.00	* (162.0)	* (162.0)
48	1,600 × 1,200 @65 Hz	81.25	65.00	* (175.5)	
49	1,920 × 1,080 @60 Hz	67.50	60.00	* (148.5) *4	* (148.5)
50	1,920 × 1,200 @60 Hz	74.04	59.95		* (154.0)
51	Macintosh13"(640 × 480)	35.00	66.67	* (30.24)	
52	Macintosh16"(832 × 624)	49.72	74.54	* (57.28)	
53	Macintosh21"(1,152 × 870)	68.68	75.06	* (100.0)	

*1: Based on SMPTE 274M standard.   *2: Based on SMPTE RP211 standard.
*3: Based on SMPTE 295M standard.   *4: The input signal is recognized as 1,125 (1,080) / 60p.
*5: When selected the RGB format and 525p signal input to the Mini D-sub 15P terminal, it is recognized as VGA 60Hz signal.
*6: When inputted VGA 60Hz format signal from the other than Mini D-sub 15P terminal, it is recognized as 525p signal.
*7: Based on SMPTE 292M and 372M standards. These signals can be received when the Dual Link HD-SDI Terminal Board (TY-FB11DHD) is installed.
*8: These signals can be received when the DVI-D Terminal Board (TY-FB11DD) is installed.
Note: Signals without above specification may not be displayed properly.

Applicable Input Signals

VIDEO input (HDMI)

	Signal format	Vertical frequency (Hz)	Horizontal frequency (kHz)	Dot clock (MHz)	Number of active pixels	Total number of pixels	Number of active lines	Total number of lines
1	VGA60	59.94	31.47	25.18	640	800	480	525
2	525/60p	59.94	31.47	27.00	720	858	480	525
3	625/50p	50.00	31.25	27.00	720	864	576	625
4	750/60p	60.00	45.00	74.25	1280	1650	720	750
5	750/50p	50.00	37.50	74.25	1280	1980	720	750
6	1125/60i	60.00	33.75	74.25	1920	2200	1080	1125
7	1125/50i	50.00	28.13	74.25	1920	2640	1080	1125
8	1125/60p	60.00	67.50	148.50	1920	2200	1080	1125
9	1125/50p	50.00	56.26	148.50	1920	2640	1080	1125
10	1125/24p	24.00	27.00	74.25	1920	2750	1080	1125

Audio signal   Linear PCM : 48/44.1/32 kHz

Specifications

	TH-50VX100E	TH-65VX100E
Power Source	220 - 240 V AC, 50/60 Hz	
Power Consumption		
Power on	485 W	710 W
Stand-by condition	Save off 1.2 W, Save on 0.7 W	Save off 1.2 W, Save on 0.7 W
Power off condition	0.4 W	0.4 W
Plasma Display panel	Drive method : AC type 50-inch, 16:9 aspect ratio	Drive method : AC type 65-inch, 16:9 aspect ratio
Screen size	1,106 mm (W) × 622 mm (H) × 1,269 mm (diagonal)	1,434 mm (W) × 807 mm (H) × 1,646 mm (diagonal)
(No.of pixels)	2,073,600 (1,920 (W) ×1,080 (H)) [5,760 × 1,080 dots]	
Operating condition		
Temperature	0 °C - 40 °C	
Humidity	20 % - 80 %	
Applicable signals		
Scanning format	525 (480) / 60i · 60p, 625 (575) / 50i · 50p, 750 (720) / 60p · 50p, 1125 (1080) / 60i · 60p · 50i · 50p · 24p · 25p · 30p · 24sF, 1250 (1080) / 50i	
PC signals	VGA, SVGA, XGA, SXGA UXGA ···· (compressed) Horizontal scanning frequency 15 - 110 kHz Vertical scanning frequency 48 - 120 Hz	
Connection terminals		
HDMI A-B	TYPE A Connector × 4	
COMPONENT/RGB IN	Y/G (RCA PIN JACK) with sync 1.0 Vp-p (75 Ω) P_B/B, P_R/R (RCA PIN JACK) 0.7 Vp-p (75 Ω) AUDIO IN (RCA PIN JACK × 2) 0.5 Vrms	

PC IN	(HIGH-DENSITY MINI D-SUB 15PIN) Y or G with sync 1.0 Vp-p (75 Ω)
	               Y or G without sync 0.7 Vp-p (75 Ω)
	B/P_B/C_B: 0.7 Vp-p (75 Ω)
	R/P_R/C_R: 0.7 Vp-p (75 Ω)
	HD/VD: 1.0 - 5.0 Vp-p (high impedance)
	VBS (use HD port) with picture 1.0 Vp-p (high impedance)
	             without picture 0.3 Vp-p (high impedance)
	AUDIO IN (M3 JACK) 0.5 Vrms	

SERIAL	EXTERNAL CONTROL TERMINAL (D-SUB 9PIN)	RS-232C COMPATIBLE
Speaker terminal	6 Ω, 16 W [8 W + 8 W] (10 % THD)	8 Ω, 20 W [10 W + 10 W] (10 % THD)
Accessories Supplied		
Remote Control Transmitter	N2QAYB000323	
Batteries	2 × R6 Size	
Fixing band	TMME203 × 1	
Dimensions (W × H × D)	1,210 mm × 724 mm × 93 mm	1,554 mm × 924 mm × 94 mm
Mass (weight)	approx. 37.0 kg net	approx. 69.0 kg net

Notes:

• Design and specifications are subject to change without notice. Mass and dimensions shown are approximate.

• This equipment complies with the EMC standards listed below.
EN55022, EN55024, EN61000-3-2, EN61000-3-3.

Information for Users on Collection and Disposal of Old Equipment and used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Cd

Customer's Record

The model number and serial number of this product can be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number _____   Serial Number _____

Panasonic Corporation

Web Site : http://panasonic.net/